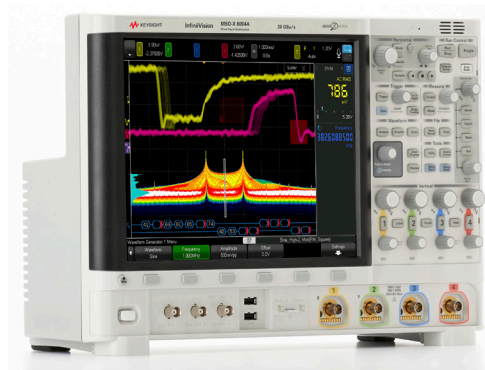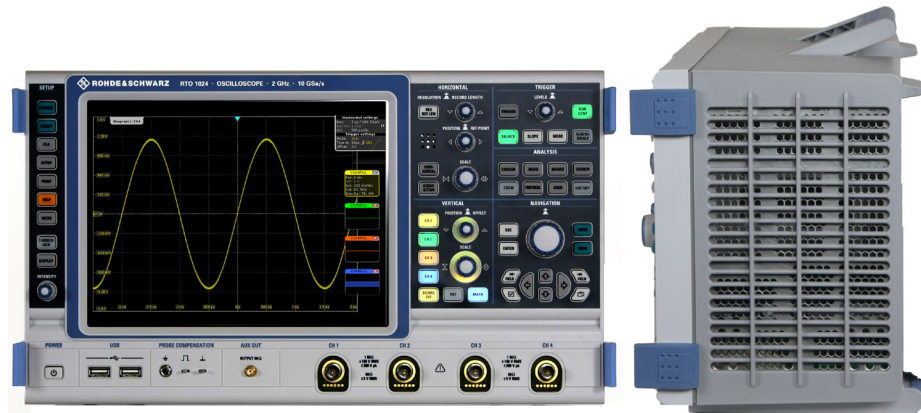# Keysight Competitive Comparison
Keysight 6000 X–Series versus Rohde & Schwarz RTO1000
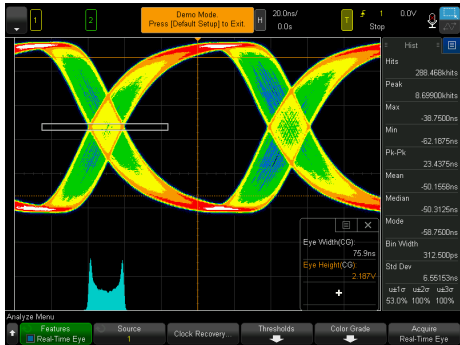
Keysight 6000 X-Series

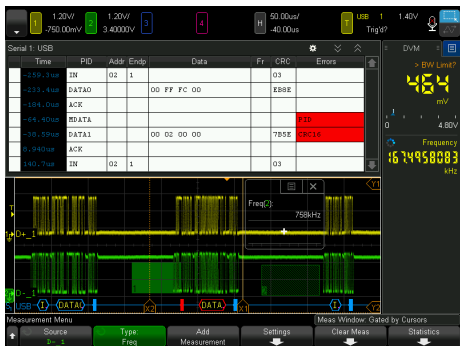## Rohde & Schwarz RTO1000 Series

The Keysight Technologies, Inc. 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.
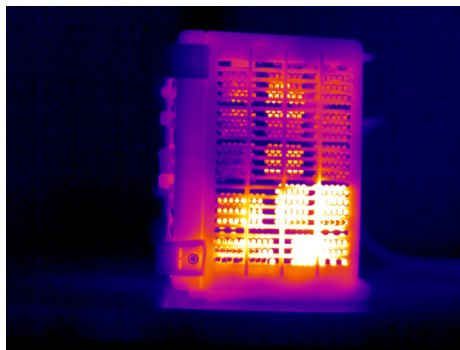
	R&S RTO1000		Keysight 6000 X-Series	
Bandwidth	Up to 4 GHz	X	Up to 6 GHz	√
Max sampling rate	10 GSa/s to up to 2 GHz	X	20 GSa/s to all models	√
Standard memory depth (2 ch)	20 GSa/s to 4 GHz	√		
	Up to 40 M	√	Up to 4 M	X
RMS noise at 1 mV/div, 50 Ω	240 uV at 4 GHz	X	147 uV at 4 GHz	√
Waveform update rate (vectors on)	Up to 600,000 wfms/s	√	Up to 450,000 wfms/s	√
Zone trigger	Not available	X	Yes – hardware based > 100 K triggers/s	√
Display	10.4" resistive touch	X	12.1" capacitive multi-touch	√
Other integration	Not available	X	2 ch AWG, counter, DVM	√
Operating system	Windows 7	X	Embedded	√
Std passive probe	500 MHz	X	700 MHz	√
Input voltage	150 Vrms	X	300 Vrms	√
Localized GUI	No	X	Yes	√
Voice control	No	X	Yes – localized	√
Size	8.0" deep, 21 lbs.	X	6.1" deep, 15 lbs.	√
Operating range	0 to 45 °C, 3,000 M	X	0 to 50 °C, 4,000 M	√
Power consumption	450 W max	X	250 W max	√
Sound level	35 to 38 dB SPL	X	32 dB SPL (up to 4x quieter)	√
Standard calibration interva	1 year	X	2 years	√
Mean Time Between Failure (MTBF)	Not specified	X	> 120,000 hours	√
BenchVue support	Not available	X	Yes	√

KEYSIGHT
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Unlocking Measurement Insights

Jitter/RTE

FFT

Protocol

12.1" capacitive touch screen
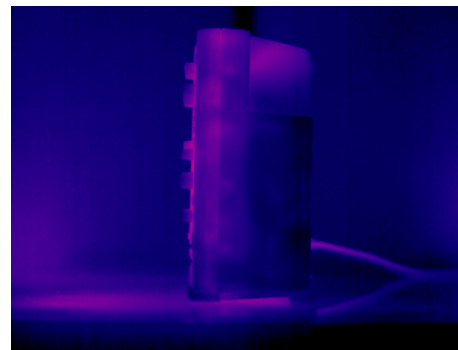

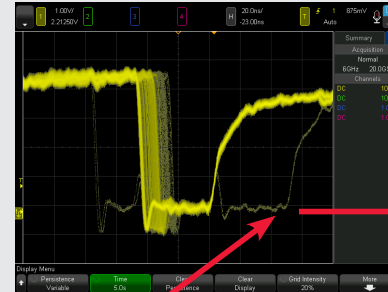Rohde RTO consumes almost double the power and runs significantly hotter than the 6000 X-Series.

The 6000 X-Series' low power consumption helps it reach an excellent MTBF of > 120,000 hours.

An integrated dual channel function/ arbitrary waveform generator allows you to generate differential, clock and data, two channel modulation, and IQ signals. An integrated waveform editor allows you to edit waveforms without additional equipment and saves you bench space.

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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