

R&S®RTA4000

versus

Tektronix MDO4000C

Designed with class-leading signal integrity and responsive ultra-deep memory, the R&S®RTA4000 brings the power of 10 to a new level. A Rohde & Schwarz designed 10-bit ADC plus class-leading noise and memory depth gives you sharp waveforms, more accurate measurements and confidence when facing unexpected measurement challenges. And a widely acclaimed user interface in a compact form factor with a high resolution 10.1" capacitive touchscreen allows you to easily see and use those benefits.

Your benefit	Features
Sharp waveforms, more accurate measurements.	10-bit ADC with class-leading noise performance gives you more accurate measurements and sharper waveforms. Measure your signal, not the noise on your scope.
Capture long periods at high sample rate	The R&S®RTA4000 oscilloscope's standard deep memory gives you extra insurance for those difficult measurements where other scopes run out of capacity, and the excellent timebase accuracy means your deep memory measurements are more accurate.
Multiple ways to interact with the oscilloscope.	Different users prefer different ways to interact with the scope. The R&S®RTA4000 features a high-resolution, capacitive touchscreen and a designed-for-touch GUI. Knobs/buttons are also available, along with the ability to control the scope via a keyboard/mouse and even remotely via any common web browser.

► For more information, visit www.rohde-schwarz.com/catalog/RTA4000



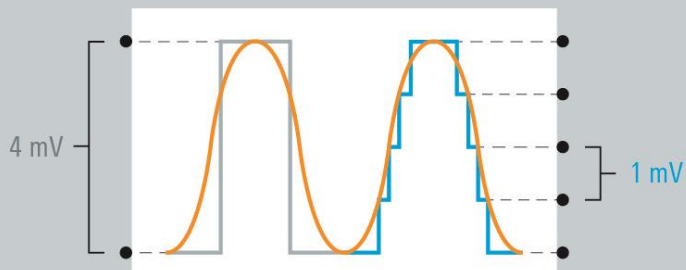
Parameter	R&S®RTA4000	Tektronix MDO4000C
Acquisition system		
Bandwidth (MHz)	200, 350, 500, 1000 (1GHz) (upgradable)	200, 350, 500, 1000 (1GHz) (upgradable)
ADC resolution	10-bit	8-bit
Max. resolution	16-bit with high resolution	11-bit with high resolution
Max. sampling rate	5 Gsample/s (all models)	2.5 Gsample/s on all models but 1GHz (5 Gsample/s)
Standard memory depth	100 Msample per ch all channels 200 Msample per ch interleaved	20 Msample per ch all channels
Segmented memory depth/history mode	100 Msample per ch all channels 200 Msample per ch interleaved	not available
Waveform update rate	64 000 waveforms/s standard 700 000 waveforms/s in fast segmented memory mode	270 000 to 340 000 waveforms/s
MSO sampling rate/memory	2.5 Gsample/s per ch all channels 5 Gsample/s per ch interleaved / 100 Msample per ch all channels 200 Msample per ch interleaved	500 Msample/s / 20 Msample
Hardware dynamic range, full bandwidth	1 MΩ: 5 mV to 100 V 50 Ω: 5 mV to 10 V	1 MΩ: 50 mV to 100 V 50 Ω: 50 mV to 10 V
Multi-domain analysis	yes, 4 inputs up to bandwidth of base unit	yes, 1 input up to 6GHz
Signal Integrity		
Noise 1 mV/div, 200 MHz, 50 Ω, % full scale	0.6 %	2.1 %
DC gain accuracy	1 % to 2.5 %	1.5 % to 3.0 %
Timebase accuracy	±0.5 ppm	±5 ppm
Form Factor		
Display	10.1" WXGA (1280x800)	10.4" XGA (1024x768)
Touchscreen	yes – capacitive	no
Grid annotation	yes	no
Boot time	~10s	~50s
Dimensions	390 mm x 220 x 152 mm	439 mm x 229 mm x 147 mm
Weight	3.3 kg	5 kg

10-bit ADC provides 4 times the vertical resolution of an 8-bit ADC

Traditional scope
8-bit vertical resolution

R&S®RTA4000
10-bit vertical resolution

Finest resolution for a 1 V signal



Noise performance



RTA4000 utilizes a low-noise frontend designed to take advantage of the 10-bit ADC and allow you to see more signal detail.

Comparison

1/3 the noise ensures more accurate measurements and makes it easier to see events that might be hidden by the MDO4000C's noise.

RTA4000 0.7%

MDO4000C 2.1%

Advantage factors of R&S®RTA3000 versus Tektronix MDO4000C



4 times
more ADC resolution



10 times
more memory



10 times
better timebase accuracy



3 times
less noise



∞
capacitive touch



34 %
less weight