

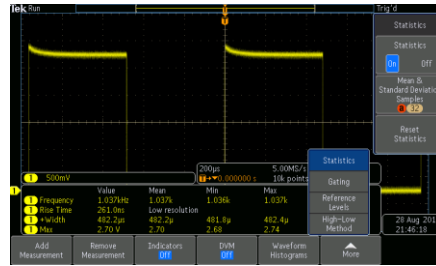
# R&S®RTM3000 versus Tektronix MDO3000



The R&S®RTM3000 outperforms the Tektronix MDO3000 in key parameters with the power of ten



R&S®RTM3000: 10.1" display, 1280 × 800 pixel resolution



Tektronix MDO3000: 9" display, 800 × 480 pixel resolution

Your benefit	Features
Sharp waveforms, more accurate measurements	10-bit ADC with the R&S®RTM3000 oscilloscope's low-noise frontend gives you more accurate measurements and sharper waveforms
Capture long periods at high sample rate	The R&S®RTM3000 oscilloscope's standard deep memory gives you extra insurance for those difficult measurements where other scopes run out of capacity
Debug in the domain you're most comfortable with	Not only does the R&S®RTM3000 provide excellent time domain capabilities, it also offers advanced frequency domain analysis with simple RF setup, spectrogram and time-gated RF views

Parameter	R&S®RTM3000	Tektronix MDO3000
<b>Acquisition system</b>		
Bandwidth	100/200/350/500/1000 MHz (1 GHz) (upgradeable)	100/200/350/500/1000 MHz (1 GHz) (upgradeable)
ADC resolution	10-bit	8-bit
Max. resolution	16-bit with high resolution	11-bit with high resolution
Max. sampling rate	5 Gsample/s	2.5 Gsample/s (100/200/350/500 MHz) 5 Gsample/s (1 GHz)
Standard memory depth	40 Msample per channel (all channels) 80 Msample (interleaved)	10 Msample per channel (all channels)
Segmented memory depth/history mode	Optional – 400 Msample	no
Waveform update rate	64 000 waveforms/s standard 2 000 000 waveforms/s in fast segmented memory mode	235 000 to 280 000 waveforms/s standard
MSO sampling rate / memory	5 Gsample/s / 80 Msample	500 Msample/s / 10 Msample
Hardware input sensitivity	500 $\mu$ V/div to 10 V/div	1 mV/div (bandwidth limited) to 10 V/div
Frequency domain analysis	yes, 4 inputs up to bandwidth of base unit with spectrogram	yes, 1 input up to bandwidth of base unit optional up to 3 GHz
Passive probes	500 MHz 10:1	500 MHz 10:1 on 500 MHz and below 1 GHz 10:1 on 1 GHz scopes
<b>Accuracy</b>		
DC gain accuracy	1.5 % to 3 %	1.5 % to 3 %
Channel-to-channel isolation	> 50 dB up to bandwidth of scope	> 40 dB at $\leq$ 100 MHz > 30 dB at > 100 MHz BW
<b>Form factor</b>		
Display	10.1" (1280 × 800) pixel resolution	9" (800 × 480) pixel resolution
Touchscreen	yes – capacitive	no
Grid annotation	yes	no
Boot time	~ 10 s	~ 45 s

## Innovative user interface, quick and easy to use



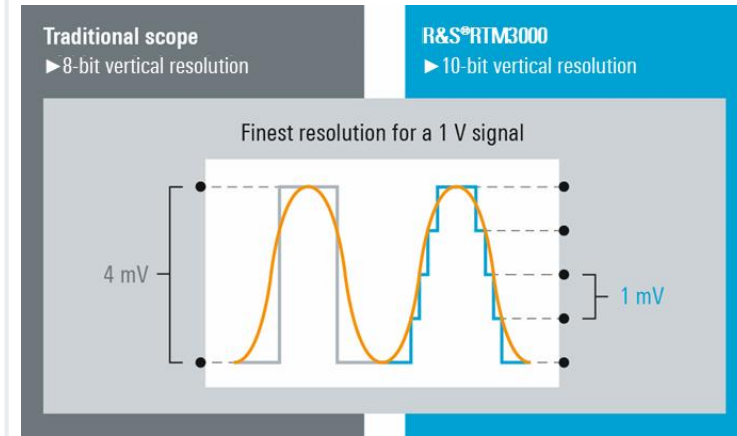
The R&S®RTM3000 user interface offers features not available on the Tektronix MDO3000.

- ▶ Touchscreen with gesture support and on-screen annotation
- ▶ Mouse support
- ▶ Grid annotations for easy determination of vertical and horizontal values
- ▶ Pull up/down menu for optimized waveform viewing
- ▶ Quick measure button to immediately display nine automated measurements on the signal

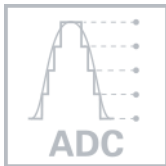


Configurable toolbar (including undo and redo) for fast access to functions and quick finger annotation, allowing fast operation and documentation

## A 10-bit ADC provides four times the vertical resolution of an 8-bit ADC



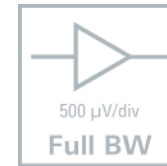
## Advantages of R&S®RTM3000 over Tektronix MDO3000



**4 x**  
More ADC resolution



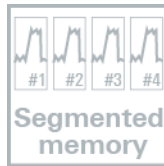
**8 x**  
More memory



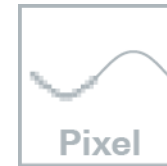
**10 x**  
Hardware dynamic range (full bandwidth)



**50 %**  
Less noise



**∞**  
More segmented memory



**2.7 x**  
More pixels