

# Tektronix 5 Series MSO vs. Rohde & Schwarz RTO2000 Series

## COMPETITIVE FACT SHEET

### Oscilloscope Design

#### Tektronix 5 Series MSO

- ✓ **Industry First** FlexChannels (up to 8) (each input is 1 analog or 8 digital)
- ✓ **Industry First** 4, 6, 8 channel models
- ✓ **Industry First** HD 1920 x 1080 15.6" Multi-touch capacitive display
- ✓ **Industry First** Std. embedded OS or Opt. Windows 10 OS
- ✓ 12 bit Analog to Digital Converter

#### Rohde & Schwarz RTO2000

- ✗ Fixed configuration: 2 or 4 analog; 16 digital with MSO option
- ✗ 2 or 4 channel models only
- ✗ WXGA 800 pixel 12.1" Multi-touch display
- ✗ Windows 7 Only
- ✗ 8 bit Analog to Digital Converter



### Analog to Digital Converter (ADC)

#### Tektronix 5 Series MSO

- ✓ 12 bit ADC
- ✓ Handles analog or digital channel
- ✓ Up to 16 bits in **New** High Res mode
- ✓ 7.6 bits ENOB @ 1 GHz High Res
- ✓ High Res comes standard!

#### Rohde & Schwarz RTO2000

- ✗ 8 bit ADC
- ✗ Only handles analog input
- ✓ Up to 16 bits in HD mode
- ✗ ~7.3 bits ENOB @ 1 GHz HD mode
- ✗ HD mode costs \$1,400 extra

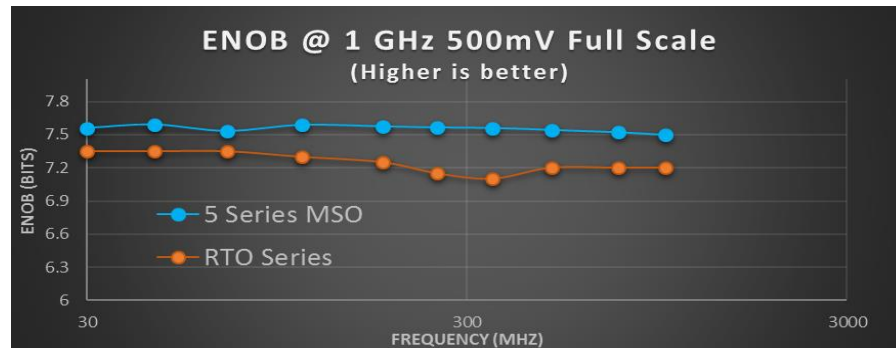
### Included Probing

#### Tektronix 5 Series MSO

- ✓ 1 GHz passive probes (≥1GHz models)
- ✓ 3.9pF Capacitive loading
- ✓ Automated compensation
- ✓ Stores compensation data in memory

#### Rohde & Schwarz RTO2000

- ✗ 500 MHz passive probes (≥1GHz models)
- ✗ 10pF Capacitive loading
- ✗ Manual compensation
- ✗ Can't store compensation data



\*ENOB values are typical

### Logic Analysis (MSO – digital channels)

#### Tektronix 5 Series MSO

- ✓ Up to 64 digital channels
- ✓ 6.25 GS/s Digital Channel Sample Rate
- ✓ 500 MHz || 100K ohm || <3 pF
- ✓ 160ps digital timing resolution
- ✓ ±40V digital threshold level range
- ✓ Up to 64 adjustable thresholds (one per channel)

#### Rohde & Schwarz RTO2000

- ✗ Up to 16 digital channels
- ✗ 5.0 GS/s Digital Channel Sample Rate
- ✗ 400 MHz || 100K ohm || 4 pF
- ✗ 200ps digital timing resolution
- ✗ ±8V digital threshold level range
- ✗ 4 adjustable thresholds (one per 4 channels)

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### Key Specifications Comparison

	Tektronix 5 Series MSO		Rohde & Schwarz RTO2000	
Max Analog Bandwidth (all channels)	✗	Up to 2.0 GHz	✓	Up to 4.0 GHz
Max Analog Sample Rate (all channels)	✗	6.25 GS/s	✓	10 GS/s
Upgradable Analog Bandwidth	✓	Yes	✓	Yes
Number of Analog Channels	✓	4, 6, or 8 – with FlexChannels™	✗	2 or 4
Digital Channel Input Bandwidth	✓	500 MHz	✗	400 MHz
Number of Digital Channels	✓	Up to 32, 48, or 64 – with FlexChannels™	✗	16
Digital Channel Sample Rate	✓	6.25 GS/s	✗	5 GS/s
Number of digital channel thresholds	✓	One per digital channel (Up to 64)	✗	One per 4 digital channels (4 max)
Number of Math / Bus channels / Measurements	✓	As many as you want!	✗	4 math / 4 bus / 8 measurements
Optional Arbitrary Function Generator (AFG)	✗	Yes – optional 1 channel, 50 MHz	✓	Yes - optional 2 channel, 100MHz
Optional DVM/ Trigger Freq. Counter	✓	Yes – Free with Registration	✗	No DVM / Counter option
Standard Analog Probes (≥1GHz models)	✓	1 GHz at 3.9pF	✗	500 MHz at 10pF
Passive Probe (auto compensate / remembers data)	✓	Yes / Yes	✗	No / No
Standard Record Length (all channels)	✓	62.5 Mpts	✗	50 Mpts
Max Waveform Capture Rate	✗	>500,000 wfms/s	✓	1,000,000 wfms/sec**
ADC Resolution	✓	12 bits	✗	8 bits
ENOB* (at 1 GHz)	✓	7.6 bits	✗	~7.3 bits
Screen Size & Resolution	✓	15.6" High Definition 1920 x 1080	✗	12.1" WXGA 1280 x 800
Operating System	✓	Std. Embedded OS or optional SSD Windows 10	✗	Windows 7 Only
Offline Scope Viewer	✓	Yes – TekScope Anywhere	✗	No

\* ENOB tested by Tektronix at 1GHz High Res, RTO data from R&S app note in HD mode. \*\*RTO2000 update rate requires settings like dot mode and manually set to 1kpts, the Tektronix scope is a simple front panel button press