

# Those days are over!

## The new Rohde & Schwarz Vector Signal Generator Family



R&S® SMU 200A

R&S® SMJ 100A

R&S® SMATE 200A

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# One size fits all?

## The Artist



### R&S® SMU 200A

High-end generator for the most demanding of requirements – when developing base stations, for example. Up to two easily combinable generator paths mean maximum flexibility no matter what the application. The optional 40-channel fading simulator opens up unlimited possibilities when it comes to developing mobile radio receivers that precisely meet the needs at hand.

#### Key features

- Up to two generators in one instrument
- I/Q modulator with 200 MHz RF bandwidth
- Lossless combination of baseband signals in digital domain
- Electronic attenuator
- Excellent ACLR of typ. +70 dB for 3GPP FDD (test model 1, 64 DPCHs)
- Fading simulator with up to 40 paths

#### Typical applications

- Base station tests
- Fading tests
- Development of high-end MCPAs

## The Allrounder



### R&S® SMJ 100A

High-quality, general-purpose lab instrument that can handle 1001 applications in the area of wireless development. Excellent signal quality plus superb operating convenience make every measurement fast and reliable

- Baseband generator with realtime signal generation
- Arbitrary waveform generator with up to 64 Msamples for I and Q
- Intuitive user interface with graphical representation of signal flow
- Graphical representation of baseband signal with transient recorders
- Electronic attenuator
- GPIB code compatible with R&S® SMU 200A.

- Development of receivers
- Tests on mobile stations, WLAN cards, etc.

## The Workhorse



### R&S® SMATE 200A

Ultrafast generator for use in automatic systems. Two complete generators up to 6 GHz and ATE-optimized interfaces make it the instrument of choice. Especially since the R&S® SMATE 200A offers the same RF performance as the R&S® SMU 200A.

- Up to two 6 GHz generators in one instrument
- Very short setting times for frequency and level (<2 ms)
- Flexibly addressable Fast Hop mode (<400 μs, typ. 300 μs)
- Special hardware triggers
- Electronic attenuator
- Modified cooling concept for rack use
- Remote control via LAN (Gigabit Ethernet) and GPIB
- GPIB code compatible with R&S® SMU 200A

- Production of baseband and RF components
- Chip tests in production
- General use in ATE systems

Product comparison	R&S® SMU 200A	R&S® SMJ 100A	R&S® SMATE 200A
Frequency range	100 kHz to 2.2, 3, 4 or 6 GHz	100 kHz to 3 or 6 GHz	100 kHz to 3 or 6 GHz
Switching time for frequency	< 3 ms	< 5 ms	< 2 ms, typ. 1.2 ms
SSB phase noise at 1 GHz (20 kHz offset)	<-131 dBc, typ. -135 dBc	<-129 dBc, typ. -133 dBc	<-131 dBc, typ. -135 dBc
ACLR 3GPP Test Model 1,64 DPCH Adjacent channel Alternate channel	> 67 dB, typ. 70 dB > 72 dB, typ. 74 dB	> 66 dB, typ. 69 dB > 68 dB, typ. 71 dB	> 67 dB, typ. 70 dB > 72 dB, typ. 74 dB
Level uncertainty f < 3 GHz f > 3 GHz	0.5 dB 0.9 dB	0.7 dB 0.9 dB	0.5 dB 0.9 dB
Second RF path	Yes	No	Yes (2 x 6 GHz possible)
Baseband generator with realtime signal generation and ARB	Yes	Yes	Yes
Second baseband generator	Yes	No	Yes
Analog I/Q Input	Yes	Yes	Yes
Analog baseband Input	Yes	No	No
Low phase noise option	Yes	No	Yes (for both paths)
FM/φM	Yes	Yes	Yes
Fading simulator	Yes	No	No