

ROHDE & SCHWARZ

SMU200A

The Rohde & Schwarz SMU200A is a high-performance vector signal generator designed to meet the rigorous requirements of research, development, and production of modern communication systems. It features a highly flexible architecture capable of combining up to two independent RF paths and dual complete baseband paths in a single 4 RU cabinet. With excellent spectral purity, a 200 MHz I/Q modulator bandwidth, and extensive digital standard support including LTE, 3GPP FDD, and GPS, it provides unmatched versatility for complex signal generation.

SPECIFICATIONS

Frequency

Minimum Frequency	100 kHz Hz
Maximum Frequency	6 GHz (configuration dependent) Hz
Frequency Resolution	0.01 Hz

Output

Output Power Range	-120 dBm to +13 dBm (standard); up to +19 dBm / +25 dBm (option and frequency dependent)
Phase Noise	typ. -135 dBc/Hz (1 GHz carrier, 20 kHz offset, 1 Hz BW)

Modulation

Modulation	I/Q, Digital, Pulse
Sweep Modes	Step, List

General

Reference Oscillator	Standard TCXO, optional OCXO (Option B1)
Interfaces	GPIO, LAN, USB
Display	Graphical user interface with signal flow block diagram
Operating System	Windows XP Embedded
Recommended Calibration Interval	1 year

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 400 Hz
Dimensions (W×H×D)	435 mm × 192 mm × 460 mm mm

Frequency Characteristics

Frequency Range (Path 1)	100 kHz to 2.2 / 3 / 4 / 6 GHz (by option)
Frequency Range (Path 2)	100 kHz to 2.2 / 3 GHz (by option)

Spectral Purity

SSB Phase Noise	typ. -135 dBc (f = 1 GHz, 20 kHz carrier offset, 1 Hz measurement bandwidth)
Broadband Noise	typ. -153 dBc (CW, f = 1 GHz, >5 MHz carrier offset, 1 Hz measurement bandwidth)
Subharmonics	None (f ≤ 3 GHz)

I/Q Modulation

I/Q Modulator Bandwidth	200 MHz RF bandwidth
Adjacent Channel Power Ratio (ACPR)	typ. +70 dB for 3GPP FDD (ACLR)

Internal Baseband Generator

Baseband Generator Paths	Up to 2 complete, independent baseband paths
Supported Digital Standards	Eutra/LTE, 3GPP FDD, GPS (configuration dependent)
Realtime Signal Generation	Universal coder included
Software Support	Pulse Sequencer software (generates complex pulses/bursts)

Interfaces and Connectivity

USB Ports	Yes (supports keyboard, mouse, memory stick)
Remote Control Interfaces	GPIB, LAN

General Data and Environmental

Cabinet Height	4 height units (4 RU)
Help System	Context-sensitive help system integrated

Baseband & Fading

Fading Simulator (Option B14)	Up to 40 fading paths (with 2 fading simulator modules)
DAC Resolution	16-bit
Baseband Clock Frequency	Up to 100 MHz

Modulation & Baseband

AWGN Generator	Supported (requires Option SMU-K62)
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Measurement Options

Bit Error Rate (BER) Measurement	Supported (requires Option SMU-K80)
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Power

AC Input Voltage	100 V to 240 V AC
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TECHNOLOGY

Vector Signal Generation

APPLICATIONS

Research & Development, Production Testing, Wireless Communications

