ROHDE & SCHWARZ

PR100

The Rohde & Schwarz PR100 is a highly sensitive portable receiver designed for radiomonitoring, interference hunting, and transmitter localization in the field. Operating over a wide frequency range up to 7.5 GHz, it combines real-time spectrum analysis with compact, battery-powered operation for demanding mobile applications.

SPECIFICATIONS

General

Interfaces	LAN (10/100 Base-T), USB (mini-B), SD card slot, 3.5 mm headphone jack, external power supply input
Display	6.5" color LCD, VGA (640 × 480 pixels)

Physical

Power Supply	100 V to 240 V AC external adapter (50 Hz to 60 Hz) / 19 V DC input to device; internal Lithium-ion battery
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	320 mm × 192 mm × 62 mm mm
Weight	3.5 kg kg

Frequency

Frequency Range	9 kHz to 7.5 GHz
Tuning Resolution	1 Hz

Receiver Capabilities

Real-time Bandwidth	10 MHz
IF Spectrum Span	10 kHz to 10 MHz
Demodulation Bandwidths	150 Hz to 500 kHz
Demodulation Modes	AM, FM, LSB, USB, CW
Measurement Modes	Fixed Frequency, Frequency Scan, Channel Scan

RF Performance

RF Input Impedance	50 Ω
RF Input Connector	N female
Maximum Input Level	+20 dBm (preamplifier off, RF attenuation ≥ 10 dB)
RF Attenuation Range	0 dB to 40 dB in 10 dB steps
RF Preamplifier Gain	20 dB (nominal, switchable)
Noise Figure (1.5 MHz to 30 MHz)	< 15 dB (typ. 12 dB, preamplifier off)
Noise Figure (30 MHz to 3 GHz)	< 12 dB (typ. 7 dB, preamplifier off)
Noise Figure (3 GHz to 7.5 GHz)	< 15 dB (typ. 10 dB, preamplifier off)
Third-Order Intercept Point (IP3) (30 MHz to 3 GHz)	typ. +10 dBm (preamplifier off)
Third-Order Intercept Point (IP3) (3 GHz to 7.5 GHz)	typ. +10 dBm (preamplifier off)
Second-Order Intercept Point (IP2) (30 MHz to 3 GHz)	typ. +40 dBm (preamplifier off)
RF Input VSWR	< 2.0 (f < 1.5 GHz), < 2.5 (f >= 1.5 GHz)
Image Rejection	> 70 dB (typ. 80 dB)
IF Rejection	> 70 dB (typ. 80 dB)
Phase Noise	< -100 dBc/Hz at 10 kHz offset (f <= 1 GHz)

Environmental

Storage Temperature Range	-40 °C to +70 °C
Protection Class	IP51 (when placed in protective carrying bag)
Vibration Resistance	Meets MIL-STD-810F, Method 514.5, Procedure I
Shock Resistance	Meets MIL-STD-810F, Method 516.5, Procedure I

Power & Electrical

Battery Operating Time	approx. 4 hours

Connectivity

Remote Control Interface	LAN (10/100 Base-T)
Remote Control Protocol	SCPI

Memory & Storage

External Memory Support	SD card (up to 32 GB)
Data Recording Formats	IQ data, spectrum data, audio (WAV), screenshots (BMP)

Audio & Output

Audio Output	Built-in speaker, 3.5 mm headphone jack

Configurations & Options

GPS Support Option	R&S PR100-GPS (external GPS receiver)
Internal Recording Option	R&S PR100-IR
Direction Finding Option	R&S PR100-DF (frequency range 20 MHz to 6 GHz)

Measurement Speed

Memory Scan Speed	up to 150 channels/s
Panorama Scan Speed	up to 2.5 GHz/s (with R&S PR100-PS option)

Frequency Reference

Internal Reference Temperature Stability	±0.5 ppm (0 °C to +50 °C)
Internal Reference Aging	±1.0 ppm/year

Demodulation

BFO Tuning Range	±8 kHz (10 Hz steps)
Squelch Range	-30 dBµV to +130 dBµV (signal strength)

Power Supply

External DC Input Range	19 V to 32 V DC
Power Consumption	typ. 12 W (without battery charging), max. 28 W (with battery charging)

Interfaces

Antenna Control Interface	15-pin D-Sub connector for active directional antennas

Power

Lithium-Ion Battery Pack	7.2 V, 9 Ah (R&S PR100-BP)
Battery Charging Time	Approx. 4 hours (when receiver is switched off)

Compliance

EMC Compliance	Meets EN 55011 (Class B), EN 61326-1, EN 301 489-1
Safety Compliance	Meets EN 61010-1

Performance

Level Measurement Uncertainty (9 kHz to 3 GHz)	< 1.0 dB (typ. 0.5 dB) for RF levels > -100 dBm (preamplifier off)
Level Measurement Uncertainty (3 GHz to 7.5 GHz)	< 1.5 dB (typ. 1.0 dB) for RF levels > -90 dBm (preamplifier off)

TECHNOLOGY

Superheterodyne Receiver with Digital IF and Real-time FFT Spectrum

APPLICATIONS

Interference Hunting, Radiomonitoring, and Transmitter Localization

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.