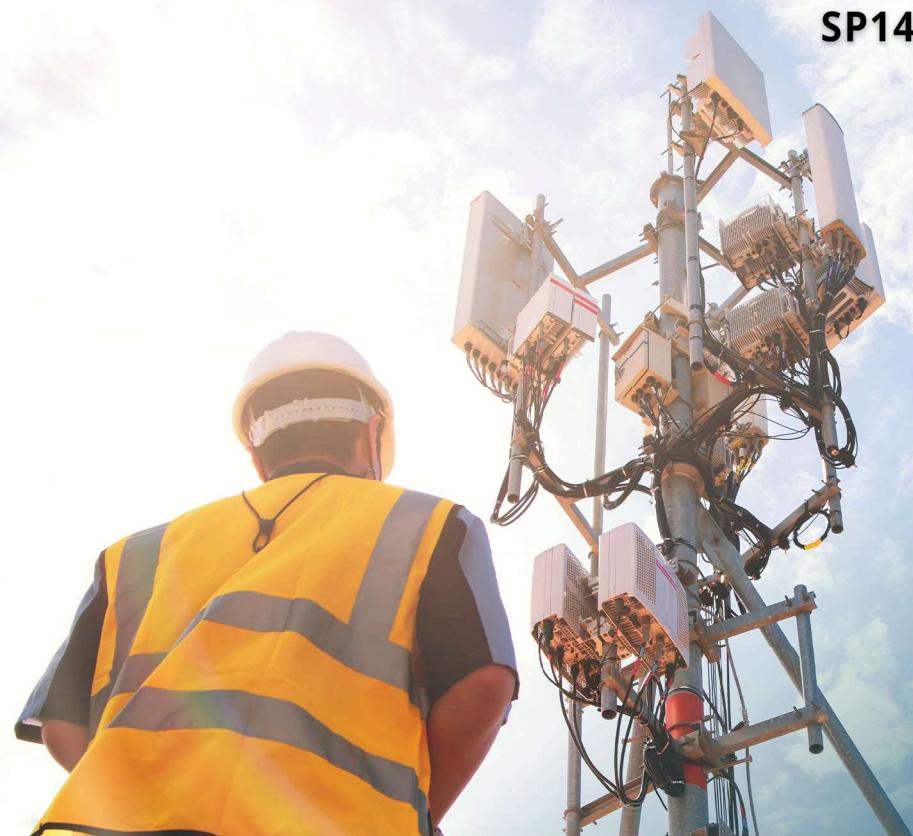




SP145 Real-Time Spectrum Analyzer



Signal Hound designs and builds powerful, affordable spectrum analyzers and signal generators for engineers, operators and RF professionals around the globe.

SPECIALIZED FOR ACCURATE REMOTE SPECTRUM MONITORING AND ANALYSIS IN A PORTABLE AND DURABLE FORMAT.

The SP145 is a high-performance 14.5 GHz real-time spectrum analyzer and monitoring receiver. It features 200 GHz/sec sweep speed, 40 MHz streaming bandwidth, and -160 dBm displayed noise average. This impressive product includes an internal GPS adding a critical dimension of spectrum analysis when out in the field. The SP145 is USB-C powered for fast and accurate RF data acquisition in a continuously changing environment.

APPLICATIONS

- General Purpose RF Test & Measurement
- Phase Noise Characterization
- EVM Measurement
- Airborne RF Measurement Systems
- Spectrum Monitoring
- WiFi & Bluetooth Characterization
- Calibration
- Manufacturing Test
- Demodulation
- Satellite Peaking
- RF Surveying

FEATURES

- 200 GHz/sec Sweep Speed
- 40 MHz Streaming Bandwidth
- Internal GPS
- Programmable API/SCPI Automation
- DANL -160 dBm
- Real-time Analysis



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SP145 Real-Time Spectrum Analyzer & Monitoring Receiver

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Preliminary Specifications

Frequency Range	100 kHz to 14.5 GHz		
Sweep Speed	Speed	RBW	
	<ul style="list-style-type: none"> • 200 GHz/sec ≥ 70 kHz • 135 GHz/sec 30 kHz • 90 GHz/sec 10 kHz • 36 GHz/sec 3 kHz • 13.5 GHz/sec 1 kHz 		
Displayed Average Noise Level (DANL) REF LEVEL \leq -20 dBm	Input Frequency Range	dBm/Hz	
	<ul style="list-style-type: none"> • 100 kHz to 50 MHz -159 dBm • 50 MHz to 2.7 GHz -163 dBm • 2.7 GHz to 8.5 GHz -159 dBm • 8.5 GHz to 14.5 GHz -155 dBm 		
I/Q Acquisition Modes	Calibrated Streaming I/Q: Up to 40 MHz of selectable I/Q streaming bandwidth		
Timebase Accuracy	\pm 1 ppb when locked to GPS		
System Noise Figure (typ)	<ul style="list-style-type: none"> • 8 dB over 50 MHz to 2.7 GHz • 10 dB from 2.7 GHz to 4.5 GHz • 12 dB from 4.5 GHz to 8.5 GHz 		
Linearity	IP_2	IP_3	
	<ul style="list-style-type: none"> • 50 kHz to 650 MHz +36 dBm • 650 MHz to 4.5 GHz +25 dBm • 4.5 GHz to 14.5 GHz +20 dBm 	<ul style="list-style-type: none"> • 50 MHz to 2.7 GHz +26 dBm • 2.7 GHz to 6 GHz +23 dBm • 6 GHz to 14.5 GHz +18 dBm 	
Amplitude Accuracy	100 kHz to 6 GHz • \pm 2.0 dB	6 GHz to 14.5 GHz • \pm 3.0 dB	RBW filter shape • Flat-Top windowing
Residual Responses REF LEVEL \leq -20 dBm	• 100 kHz to 14.5 GHz -90 dBm		
SSB Phase Noise at 1 GHz Center Frequency	Offset Frequency	dBc/Hz	
	<ul style="list-style-type: none"> • 10 Hz -55 • 100 Hz -78 • 1 kHz -104 • 10 kHz -118 • 100 kHz -118 • 1 MHz -134 		
Lo Leakage at RF Input	• 100 kHz to 5 GHz • 5 GHz to 14.5 GHz	-80 dBm -56 dBm	
Spurious Mixer Responses	• -40 dBc (Typical)		
Synchronization	External trigger, GPIO, Internal GPS (\pm 40ns)		
Operating Temperature	Standard 32°F to 113°F (0°C to +45°C)		
Size and Weight	• 7.45" x 4.51" x 1.81" (189mm x 115mm x 46mm) • 1.1 lbs. (0.5 kg)		
Power Consumption	• 5 VDC • 10 Watt Maximum		
Interface	USB Type C		
System Requirements	Windows or Linux Operating System, x64_86 architecture		

Ordering Options

Standard, Temperature Range 32°F to 113°F (0°C to +45°C)

Option 1, Temperature Range -22°F to 140°F (-30°C to +60°C)