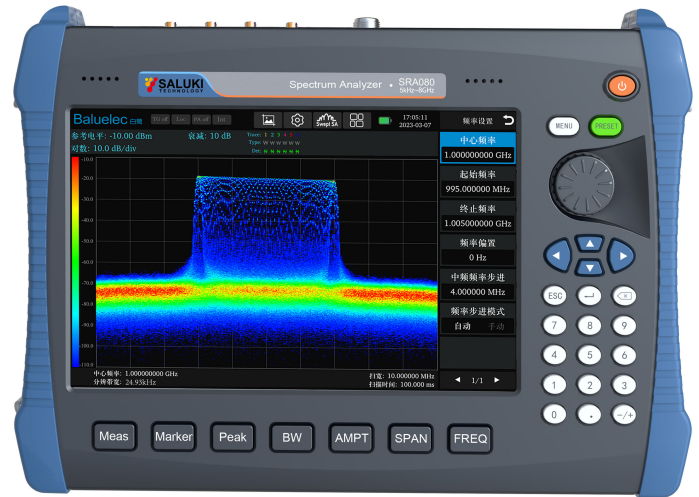


SRA080 Real-time Spectrum Analyzer

Key Features

- Frequency range: 5kHz~8GHz
- Maximum real-time bandwidth: 40MHz
- The shortest signal duration at 100% POI: 7us
- Support real-time spectrum, scanning spectrum, VNA, antenna and feeder measurement, field strength measurement, interference location, power measurement, analog modulation analysis and other measurement modes
- Up to 80dB Medium Image Rejection
- 10.1-inch bright display and supports touch operation
- Removable lithium-ion battery, convenient for field testing



Overview

SRA080 is a broadband, high-performance portable real-time spectrum analyzer, the measurement frequency covers 5kHz~8GHz, and it can be used in both indoor and outdoor environments.

The product adopts a 10.1-inch LED backlit high-brightness display and supports multi-touch operation. With measurement modes such as real-time spectrum, swept spectrum, vector network analysis, antenna feeder measurement, field strength measurement, USB power measurement, interference location and demodulation analysis, it is convenient for users to diagnose and solve various RF measurement problems on site. Up to 80dB medium image frequency suppression and extremely small residual response index make it meet the higher requirements of radio monitoring. The product testing function is very comprehensive, it can be powered by batteries, and is easy to carry. It is a powerful tool for on-site testing parameters of various electronic equipment, engineering installation and debugging, and daily maintenance. It can be widely used in communications, radio and television, radio management, electronic detection and countermeasures, precision guidance and other fields, and it is also the best choice for college teaching.

Real-time Spectrum Analysis

Frequency range: 5kHz~8GHz

Real-time analysis bandwidth: 40MHz

Minimum signal duration at 100% POI: 7us

Phase noise: 100dBc/Hz@10kHz

Window function types: Hanning, Blackman-Harris, rectangular, flat-top, Caesar, Gaussian

Maximum sampling rate: 51.2MHz

Display Modes: Density Spectrum, Waterfall, Power vs Time

Trigger mode: external trigger, intermediate frequency power, pp

Swept Spectrum Analysis

Resolution bandwidth: 1Hz~5MHz

Noise level: -165dBm

Sweep time: 20us~3000s (non-zero span), 5ms~3000s (zero span)

Comprehensive amplitude accuracy: ± 1.5 dB

Vector Network Analysis

Frequency range: 100kHz ~ 8GHz

Measurement parameters: S11、S21

RF output power: 0dBm, 30dB

IF bandwidth: 1kHz~200kHz

Display Modes: Echo/SWR, Insertion Loss, Smith Chart, Phase, Group Delay

Effective directionality: ≥ 38 dB (1MHz~8GHz)

Dynamic range: 80dB (S21, 10kHz RBW, Log mag, Average=50, >10MHz)

Antenna test

Frequency range: 100kHz ~ 8GHz

Measurement points: 101 ~ 2048

Effective directionality: ≥ 38 dB

Analog demodulation analysis

AM demodulation	Modulation rate	20Hz -100kHz
	Modulation rate accuracy	1Hz, nominal value (modulation rate<1kHz) <0.1% modulation rate, nominal value (modulation rate \geq 1kHz)
	Modulation depth	10%-95%

	Modulation depth accuracy	±4%, nominal value
FM demodulation	Modulation rate	20Hz -100kHz
	Modulation rate accuracy	1Hz, nominal value (Modulation rate<1kHz) <0.1% Modulation rate, nominal value (Modulation rate≥1kHz)
	Frequency deviation	100Hz -400kHz
	Frequency deviation accuracy	±4%, nominal value

Digital Demodulation Analysis

Modulation type	2ASK, 2FSK, GMSK, BPSK, QPSK, 8PSK, 16QAM, 64QAM
Single analysis length	Up to 80000 sample points
Symbol rate	1 ksp/s - 32Msp/s
Filter type	root raised cosine, raised cosine, Gaussian, rectangular
Test display	Error Vector Magnitude, Modulation Error Ratio, Error Vector Magnitude, Phase Error; FSK only: Frequency Deviation, Symbol Timing Error.
Display format	IQ Diagram, Constellation Diagram, I Eye Diagram, Q Eye Diagram, Phase Diagram
QPSK residual EVM	≤2.0% (100 kHz, 1MHz, 10MHz symbol rate, typical average)

General Specifications

Input/Output Interface	
RF IN/OUT	RF signal input/output, N-type negative (50Ω)
USB	Host: USB 2.0 A connector, dual USB ports
LAN	10/100 Base-T, RJ-45 connector
Headphone jack	FM/AM audio demodulation output
REF IN	10MHz reference input, SMA female, input power 0dBm to +10dBm
IF OUT	145MHz IF output, SMA female
Trig In	External trigger input, 3.3V/5V TTL level
GPS	GPS/BD antenna input port, SMA female
AUX	8-core aviation connector, directional antenna electronic compass connector
DC 20V	20VDC power adapter interface
Common Parameters	
Monitor	LED backlight, 10.1 inch TFT-LCD, 1208×800
Machine weight (including battery)	About 3.9kg (Does not include VNA option)
Dimensions (length x width x height)	334mm×242mm×68mm
Operating temperature	0°C - 50°C
Storage temperature	-20°C - +70°C
Battery	14.8V 6400mAh
Power Adapter	Input 100V~240VAC 50/60Hz 1.4A

	Output	+20V 6A
Overall power consumption	About30W	

Ordering

Configuration	Describe	Order module
Real-time Spectrum Analyzer	5kHz -8GHz	SRA080
Standard	CD-ROM (User Manual, Programming Manual)	
	AC/DC adapter (AC input, +20V output)	
Options	Advanced Measurement Suite	SRA-AMK
	High stability time base	SRA-OCXO
	Vector Network Analysis	SRA080-VNA
	Antenna and feeder measurement	SRA080-DTF
	field strength measurement	SRA-FS
	interference location	SRA-IL
	USB power sensor	UP60
	Analog Modulation Analysis	SRA-AMA
	Digital Modulation Analysis	SRA-DMA
	Omnidirectional Antenna/Directional Antenna	OA750/DA800
	Ultrashort Wave Handheld DF Antenna (9kHz~8000MHz)	SDA800