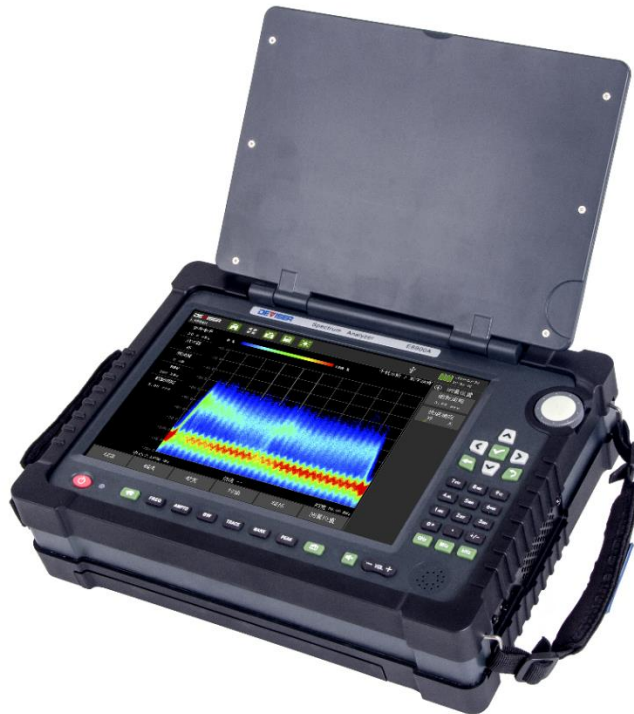


E8900A 5G Handheld Spectrum Analyzer

V1.1



Introduction

E8900A 5G Handheld Spectrum Analyzer is a new product designed for 5G NR Communication. It has higher frequency coverage, wider IF span and faster sweep speed. With E8900A, users can demodulate 5G NR gNB signal, test the coverage of 5G NR gNB and also locate the interference signal.

Product Features

- Frequency Coverage : 9kHz to 9GHz
- Sweep Speed : 30GHz/s @ 7.8kHz RBW
- Analysis Bandwidth : up to 100MHz
- Internal and external antenna
- Demodulation standard : 5G NR(FR1), TDD-LTE and FDD-LTE
- IQ data acquiring
- Spectrogram and DPS
- Gated Sweep
- GPS
- Optional support correlative interferometer DF antenna
- 10.1 " Capacitive Touchscreen
- Two Hour Battery

Measurements

Spectrum Analyzer

Frequency Range	
	9 kHz to 9 GHz
Frequency Reference	
Accuracy internal	± 0.3 ppm (0 to 50 °C)
Accuracy with GPS	± 25 ppb(*)
Bandwidth	
IF Bandwidth	20 MHz
Resolution Bandwidth(RBW)	1 Hz to 3 MHz
Video Bandwidth(VBW)	1 Hz to 3 MHz
Amplitude Ranges	
Dynamic Range	>100 dB at 1 GHz in 1Hz RBW
Measurement Range	DANL to +30 dBm
Amplitude Accuracy	
	± 1.5 dB (20 to 30 °C)
Max RF Input Operating Level	
	+25 dBm peak(typical), ± 50 VDC(>30 dB att)
Displayed Average Noise Level (DANL)	
Typical , Preamp=Off	10 MHz to 3 GHz: -140 dBm 3 GHz to 6 GHz : -135 dBm 6 GHz to 9 GHz : -130 dBm
Typical , Preamp=On	10 MHz to 3 GHz: -155 dBm 3 GHz to 6 GHz : -150 dBm 6 GHz to 9 GHz : -145 dBm
Third-Order Intercept (TOI)	
	+15 dBm (Typical)
Second Harmonic Distortion	
	<-65 dBc (Typical)
Phase Noise	
	-100 dBc/Hz @ 10 kHz offset from 1 GHz(Typical) -110 dBc/Hz @ 100 kHz offset from 1 GHz(Typical) -120 dBc/Hz @ 1 MHz offset from 1 GHz(Typical)
Spurs	
	-85 dBm (Preamp = Off)
VSWR	
	1.8 @ 10dB input attenuation
Preamplifier	
	20 dB
Attenuation	
	9 kHz to 6 GHz : 0 to 50 dB, 5 dB step

	6 GHz to 9 GHz : 0 to 30 dB, 5 dB step
Measurements	
	Spectrum Channel Power(*) Occupied Bandwidth(*) Adjacent Channel Power(*) Spectral Emission Mask(*)
Span	
	Full span, Last span, Zero span
Sweep	
	Continuous Single(*) Gated Sweep(*) : GPS Gate, External Gate
Detection	
	Peak, Negative Peak, RMS, AVG, Normal
Clock Reference	
	Internal External(*) GPS(*)
Trace	
	Up to six traces Trace Type : Clear/Write, Max Hold, Min Hold
Marker	
	Up to six Marker Type : Normal, Delta

Interference Analyzer

Measurement	
Spectrogram (Waterfall Display)	
DPS	
Oriente	
Interference Direction Finding	

5G NR Analyzer

Frequency Range	
	FR1 Band : 10 MHz to 6 GHz
IF Bandwidth	
	Up to 100 MHz
Rx sensitivity	
	-115 dBm @ SCS=30 kHz -118 dBm @ SCS=15 kHz

Measurement	
Physical Cell ID (PCI)	
Beam ID	
PBCH Channel Power	
PBCH Channel Constellation	
PBCH Channel EVM	
SS-RSRP	
SS-RSRQ	
SS-SINR	
Time Offset(*)	
Beam Statistics Analyzer(*)	Up to 8 beams
5G NR Interference Detection(*)	
PDSCH Channel Constellation(*)	
PDSCH Channel EVM(*)	
PDSCH Channel Power(*)	
Power Vs Time(*)	

LTE Analyzer

Mode	
TDD	
FDD(*)	
Measurement	
Power Vs RB	
Power Vs Time	
Constellation	
Channel Power	

Drive Test

Mode	
Spectrum indoor test	Level
Spectrum outdoor test	Level
TDD-LTE outdoor test	Cell ID, S-SS, RSRP, RSRQ, SINR
5G-NR indoor test	PCI, Beam ID, SS-RSRP, SS-RSRQ, SS-SINR
5G-NR outdoor test	PCI, Beam ID, SS-RSRP, SS-RSRQ, SS-SINR
Plot Method	
	Time, Distance
Plot Legend	
	Excellent, Very good, Good, Poor, Fail

IQ Data Acquiring

Sample Rates	
	122.88 MHz, 61.44 MHz, 30.72 MHz, 15.36 MHz, 7.68 MHz, 3.84 MHz, 1.92 MHz
IQ File Size	
	Up to 256 MB

Remote Control

Functionality	
	Spectrum Drive Test (Spectrum)
Programming Language	
	SCPI
Interfaces	
	Ethernet, WIFI

NOTE : The items(*) are not available now

General Specifications

Size	228mm X 316mm X 77mm
Weight	Less than 4.5kg
Battery Life	> 2 hours
Operating Temp Range	-10°C to +50 °C
Antenna	Internal, External
Display	10.1 " 1280× 800 Capacitive Touchscreen
Interfaces	USB2.0× 3, USB3.0× 1, LAN× 1 GPS, External Reference In, IF Out
Connectivity	Ethernet, WIFI
Memory	16 GB