

DEVISER®

E8600N/B/C/D

9kHz to 6GHz/9GHz/18GHz/26.5GHz



Portable Spectrum and Signal Analyzer

Key Benefits

- Frequency coverage width 9kHz to 26.5GHz;
- Real-time analysis of bandwidth 100 MHz;
- Superior communication signal analysis function: 5G NR、FDD/TDD-LTE、GSM;
- Spectrum analysis function: Channel power、Occupied bandwidth、Adjacent channel leakage ratio(ACLR)、Field strength、RTSA;
- Automatic interference orientation and multi-path multi-point AoA positioning, fast locking of interference areas;
- Excellent indoor and outdoor spectrum coverage map and communication network clearance test;
- Excellent recording and playback function;
- Low-power consumption design with a built-in lithium battery offering more than 4.5 hours of use, and can meet the most demanding outdoor all-weather conditions;
- The weight of E8600 is 2.5kg ~ 2.7kg, the lowest in its class!



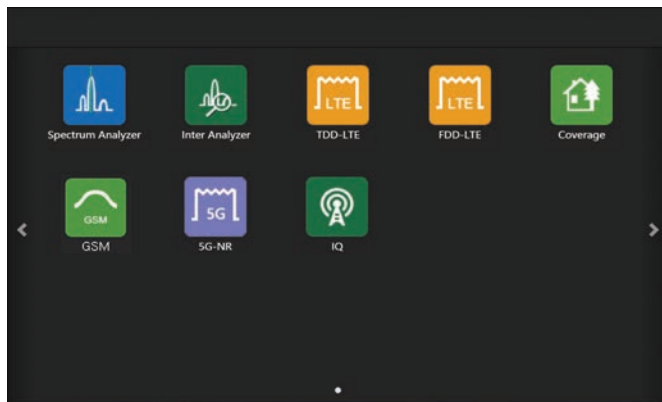
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Portable Spectrum and Signal Analyzer

Overview

With radio bandwidth requirements escalating to all-time highs, the 5G New Radio (NR) standard is poised to change the landscape of wireless communications. 5G NR promises to elevate the possibilities of 5G network service to all-new levels of flexibility and efficiency.

To claim a foothold in this space, providers and technicians must be able to characterize higher frequencies - and at higher speeds - than was possible in previous generations of spectrum analysis.



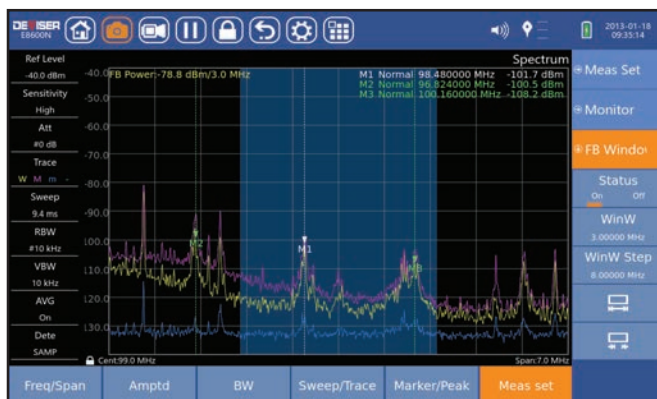
All apps



Key Measurements

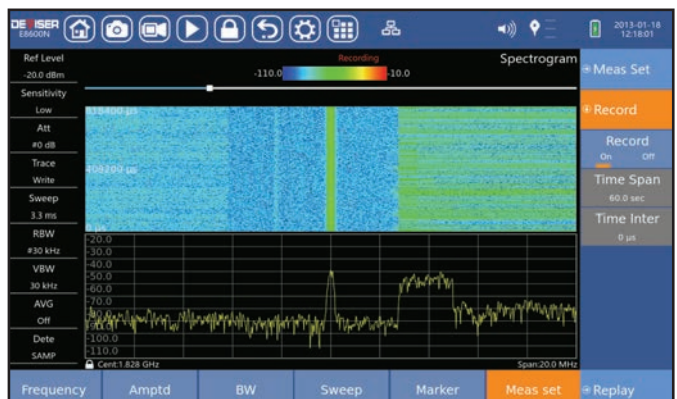
1. Spectrum analysis

The maximum frequency supported is 26.5GHz, with the characteristics of high sweep speed, can capture burst signals in real time.



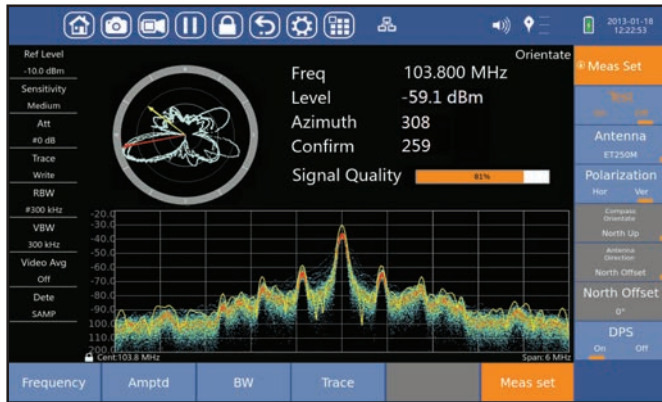
2. Spectrogram

The built-in Interference Analyzer mode targets hard-to-isolate signals that can threaten a system's capacity and coverage. Use the 3D Spectrogram tool to monitor change in the signal environment over time.



3. Orientate

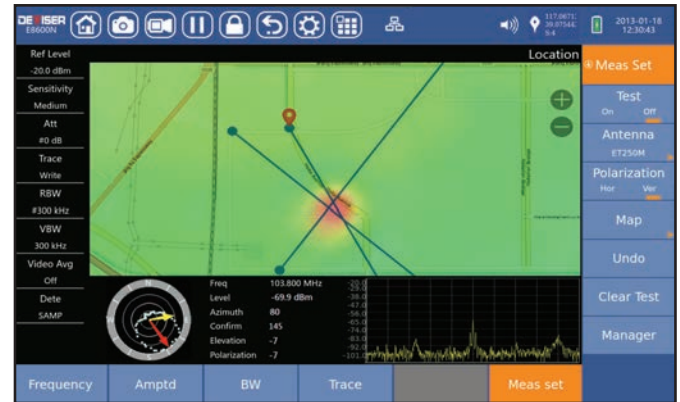
Users need to use directional antenna with GPS and electronic compass. Directional antenna is used to test the direction of the strongest interference frequency signal, electronic compass is used to automatically record the direction information of the test signal value, and GPS is used to automatically record the longitude and latitude of the current test point.



4. Location

Using directional antenna, GPS, electronic compass, electronic map, through the angle of arrival(AoA) direction finding method, locate the interference source;

In each test point, the directional antenna is used to test the interference signal, which direction appears the strongest signal



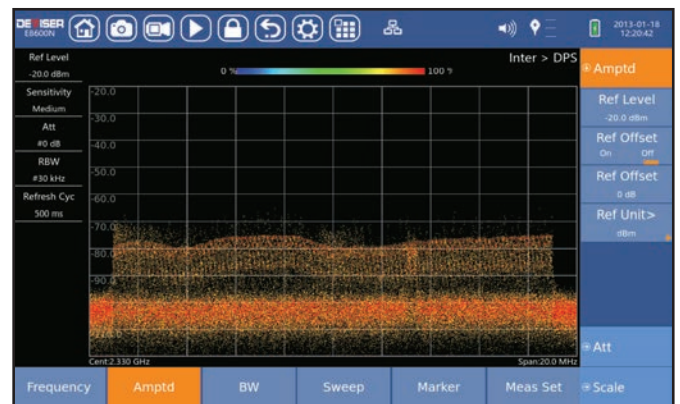
5. FDD-LTE

RB power measurement provides RB quantity, RB utilization, channel power, Cell ID ... etc. metrics. Power vs RB measure resource block allocation for 1 frame.



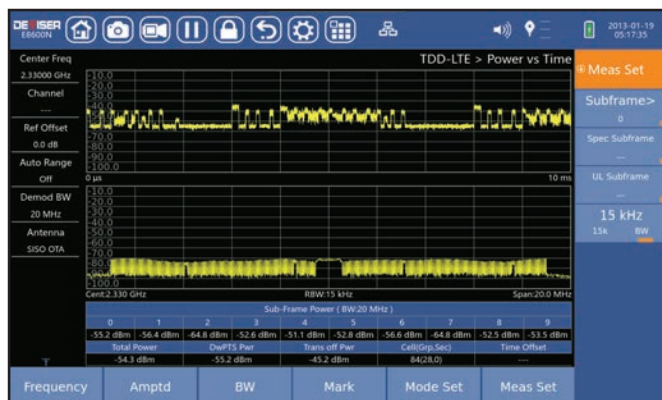
6. Digital Persistence Spectrum

Persistence testing separates the intended signal transmission from underlying low-level inference signals with supreme clarity, with no service interruptions at any point.



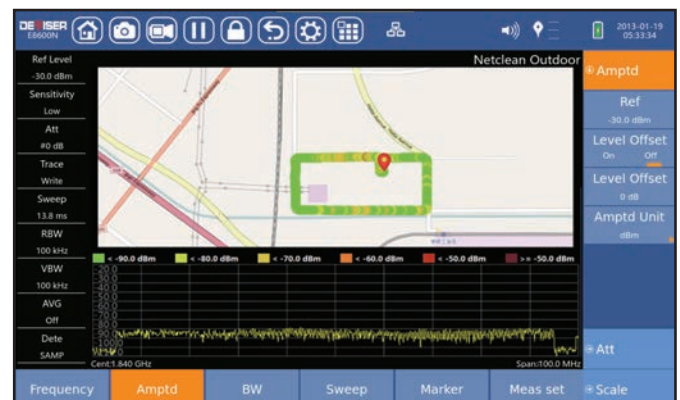
7. TDD-LTE Testing

TDD-LTE demodulation analysis includes channel power, PCI, 4G time-division multiple-access signal analysis, subframe spectrum, and special sub-frame demodulation indicators.



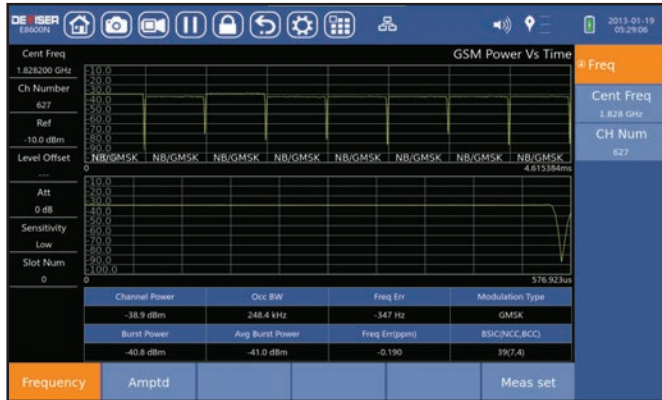
8. Netclean Outdoor

It can effectively check the area before the base station is constructed or a certain spectrum resource is used. Avoid the problem of spectrum resource interference in the later stage.



9. Power vs Time

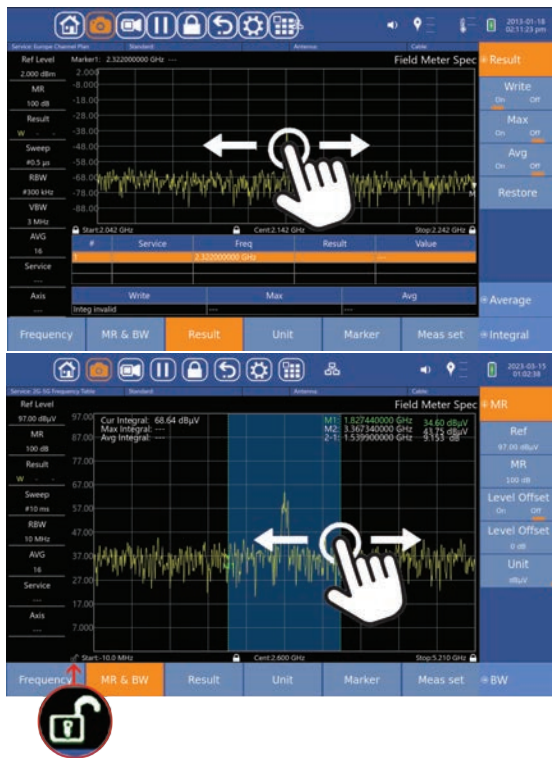
The Burst structure and spectrum of GSM wireless frames are observed by time power analysis, and BSIC, frequency offset, power and other indicators are displayed.





Multitouch

Multitouch operation with finger movement can adjust marker position and center frequency.

Before moving the center frequency, press the lock button at the lower left corner to unlock the screen as illustrated below.



Record and Playback

1. Screen capture: click on the  icon to capture current screen and save it.
2. Screen recording: click on the  icon to save the recorded video and support video playback.
3. Record and playback of test status: users can click the "Status" button to save the current test status. When testing work again, users can directly click "File management" to call up the test state in the original record state file, select "playback", user can restore the original test working state, a very convenient tool!

10. 5G NR FR1 Beam Analyzer

The 5G-NR Beam Analyzer is a key feature of the new demodulation analysis suite. This mode is configured for Massive MIMO systems, enabling you to track and measure 8 beam IDs simultaneously.



Remote Control & Data Transfer

Smart Device Operation

The instrument can be operated remotely on smart device or computer through the connection to Cloud service.

1. Wi-Fi

- 1). Insert USB Wi-Fi dongle and go to System Settings | Network to enable Wi-Fi hotspot and remote control.
- 2). Search for access point from Wi-Fi settings on computer or smart devices to join. Launch VNC Client, enter IP address and password to connect for remote desktop.

Computer or smart devices can also connect through Cloud server to the instrument for remote control to operate and display real-time measurement information.



2. LAN Connection

- 1). In order to connect to the instrument through its LAN port, use an Ethernet cable to connect the computer or smart devices to the instrument and configure its IP address to be the same subnet as the instrument.
- 2). Download VNC Client to install on computing device. Launch the VNC Client, enter the IP address of the instrument and password to connect.





Ordering information

Main term	Description	Part No.	Order No.
Standard Configuration and Accessories (included with instrument)	E8600N Portable Spectrum Analyzer Base Unit	E8600N	0120.8600.02
	E8600B Portable Spectrum Analyzer Base Unit	E8600B	0120.8600.03
	E8600C Portable Spectrum Analyzer Base Unit	E8600C	0120.8600.04
	E8600D Portable Spectrum Analyzer Base Unit	E8600D	0120.8600.05
	Battery Pack, Rechargeable, 10.8V, 9200mAh, 99.36WH	10.8V, 9200mAh, 99.36WH	6120.0100.08
	AC-DC Power Adapter(15V/4A, 60W)	15V 4A	6120.0700.05
	Power Cord	SA8300-700	6190.0500.40
	Power Adaptor Plug Cord (Europe)	AE4000-733	6290.0500.03
	Power Adaptor Plug Cord (United States)	AE4000-734	6290.0500.04
	Power Adaptor Plug Cord (United Kingdom)	AE4000-735	6290.0500.05
	Power Adaptor Plug Cord (Australia)	AE4000-736	6290.0500.06
	Transit Case 2838H with shoulder belt	2838H	6120.0601.02
	Omnidirectional Antenna ET103	ET103	6120.0400.04
	USB WIFI Module	USB150M	6120.0600.15
	RF Connector(N/SMA)	N/SMA-JK	6190.0500.37
	sucking disc (Including 3 meters cables)	sucking disc (Including 3 meters cables)	6120.0500.52
	GPS Dongle (USB Connector)	DS2500-704	2121.8000.28
	Power Supply DC Vehicle Adapter(12V/5A)	12V/5A	6120.0700.04
	user manual	E8600-024	6120.0601.01
5G NR Measurement (software option)	5G NR Beam Analyzer	E8600-828	2120.8600.01
	5G NR Constellation	E8600-829	2120.8600.02
	Power vs Time	E8600-880	2120.8600.73
	5G NR Interference Hunting	E8600-881	2120.8600.74
Spectrum Analyzer (software option))	Spectrum	E8600-830	2120.8600.03
	Channel Power measurement	E8600-831	2120.8600.04
	Occupied Bandwidth measurement	E8600-832	2120.8600.05
	Adjacent Channel Leakage Ratio measurement	E8600-833	2120.8600.06
	Field Strength measurement	E8600-834	2120.8600.07
	Spectrum Emission Mask	E8600-835	2120.8600.08
	Real Time Spectrum Analyzer	E8600-836	2120.8600.09
	Gated Sweep	E8600-837	2120.8600.10

	Spurious Emission	E8600-882	2120.8600.75
	Harmonic	E8600-888	2120.8600.82
	Phase Noise	E8600-889	2120.8600.83
	Third order Intercept	E8600-890	2120.8600.84
	Channel Scanner	E8600-891	2120.8600.85
	Channel Spectrum	E8600-892	2120.8600.86
Interference Analyzer (software option, requires ET30 series directional antenna, sold separately)	Spectrogram	E8600-838	2120.8600.11
	Digital Persistence Spectrum	E8600-839	2120.8600.12
	Oriente	E8600-840	2120.8600.13
	Interference Location	E8600-841	2120.8600.14
	Tone Search	E8600-842	2120.8600.15
	Real Time Spectrogram	E8600-843	2120.8600.16
	TDD Interference Hunting	E8600-844	2120.8600.17
	RSSI	E8600-883	2120.8600.76
	GNSS Inter hunting	E8600-893	2120.8600.87
TDD-LTE Signal Analyzer (software option)	Power vs. RB	E8600-845	2120.8600.18
	Constellation	E8600-846	2120.8600.19
	Power vs.time	E8600-847	2120.8600.20
	Control Channel Power	E8600-848	2120.8600.21
	Summary	E8600-849	2120.8600.22
FDD-LTE Signal Analyzer (software option)	Power vs. RB	E8600-850	2120.8600.23
	Constellation	E8600-851	2120.8600.24
	Control Channel Power	E8600-852	2120.8600.25
	Power vs. Time	E8600-853	2120.8600.26
	Summary	E8600-854	2120.8600.27
GSM Signal Analyzer (software option)	Constellation	E8600-894	2120.8600.88
	Summary	E8600-895	2120.8600.89
	Power vs Time	E8600-896	2120.8600.90
	Channel Spectrum	E8600-897	2120.8600.91
Coverage Mapping (software option)	Signal Strength Indoor	E8600-855	2120.8600.28
	Signal Strength Outdoor	E8600-856	2120.8600.29
	Network Clearance	E8600-861	2120.8600.34
	5G NR Indoor Coverage Mapping	E8600-884	2120.8600.77
	5G NR Outdoor Coverage Mapping	E8600-885	2120.8600.78
	TDD-LTE Outdoor Coverage Mapping	E8600-886	2120.8600.79
	FDD-LTE Outdoor Coverage Mapping	E8600-887	2120.8600.80
IQ Data Capture (software option)	IQ Capture	E8600-864	2120.8600.37
PC software	Remote Control Software	E8600-867	2120.8600.40
	Network Sweep Test Software	E8600-868	2120.8600.41

Antenna Summary Table

Antenna type	Model/Type	Picture	Frequency Range	Remark
omnidirectional antenna	Paddle Antenna ET103 (AF: 45-70 dB/m)		30MHz-6GHz	standard
	sucking disc (Including 3 meters cables)		---	standard
	Magnetic Mount Antenna ET104		700MHz-3.8GHz	custom
ET30B Directional antenna	Antenna Handle ET30B + DF Antenna (ET250M/ET500M/ET8000M)	    ET30 ET8000M ET500M ET250M	20MHz-8000MHz	optional
ET32 Directional antenna	ET6G-2 Compass ET32 Tripod MT-14		600MHz-6GHz	optional
Frequency Selective EMF Probe	EMF Probe TS-6G/TS-8G/TS3-8G		TS-6G:200MHz-6GHz TS-8G:200MHz-8GHz TS3-8G:30MHz-8GHz	optional

Specifications

Spectrum and signal Analyzer	
Model	E8600N/B/C/D
Frequency range	9kHz to 6/9/18/26.5GHz
IF bandwidth	100MHz
Frequency accuracy	±1ppm
Amplitude accuracy	E8600N/B: ±1.5dB (Typical) E8600C/D: ±2dB (Typical)
Resolution bandwidth	10Hz to 10MHz
Attenuator range	0 to 50dB
Scan Speed	20GHz/s
DANL (@ 1GHz)	-160dBm/Hz (High sensitivity mode) (Typical)
3rd-order intercept (TOI)	+14dBm (Typical)
SSB Phase Noise@1GHz	-100dBc/ Hz@100kHz (Typical)
Real-time spectrum POI	5us
5G NR Demodulation	
IF bandwidth	Up to 100 MHz
Receiving sensitivity	-118 dBm @ SCS = 30 kHz -121 dBm @ SCS = 15 kHz
Measurement content	<ul style="list-style-type: none"> Physical Cell ID (PCI) Beam ID, Beam analysis SS-RSRP, SS-RSRQ, PBCH Power, PBCH QPSK EVM RMS, Constellation
LTE Demodulation	
Mode	TDD-LTE, FDD-LTE

Remote Control	
Control interface	Ethernet, WiFi
Programming languages and other modes	SCPI, VNC
IQ Capture	
Sampling rate	1.92, 3.84, 7.68, 15.36, 30.72, 61.44, 122.88 MHz
Size of IQ File	Up to 256 MB
Common	
Display	8 inch touch screen
Port	<ul style="list-style-type: none"> 2x USB 2.0 1x Ethernet LAN port RF input External reference input External trigger input Type-C, SD Card AUX
Data transmission	USB, Ethernet, WiFi
Storage space	12 GB
Battery specifications	HYLB-1866B (10.8V, 9200mAh, 99.36WH)
Operating time	≥4.5 hours
Operating temperature	-10°C ~ +50°C
Dimensions	E8600N/B: 255mm*179mm*71mm E8600C/D: 255mm*179mm*83mm
weight	E8600N/B: 2.5kg E8600C/D: 2.7kg

