Millimeter-Wave Wideband FieldFox Handheld Analyzers

N9950B/51B/52B/53B Combo Analyzer (32/44/50/54 GHz)
N9960B/61B/62B/63B Signal Analyzer (32/44/50/54 GHz)

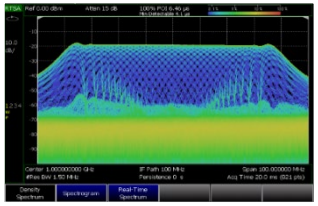
Fit for a Variety of A/D Field Tests

Keysight FieldFox handheld analyzers are the world's most integrated and precise analyzers offering frequency coverage up to 54 GHz and real-time analysis bandwidth up to 120 MHz. FieldFox offers great versatility to fit different applications in the aerospace and defense (A/D) industry like RADAR and electronic warfare signal detection and verification, military 5G deployment, and satellite ground station and in-orbit tests. FieldFox analyzers perform as a cable and antenna tester, two-port network analyzer, signal analyzer, real-time spectrum analyzer (RTSA), I/Q analyzer, and more. As the "Swiss Army knife" of portable RF test equipment, FieldFox is designed to meet all your field-test needs. Its military-grade ruggedness and weather resistance ensure accurate operation in harsh working environments.

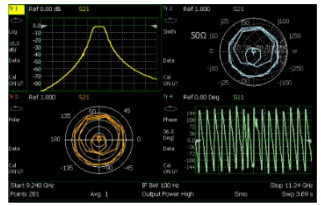
Key features

- Cable and antenna analyzer (CAT)[1]
- Spectrum analyzer
- Full 2-port vector network analyzer[1]
- Built-in power meter
- Independent signal generator
- Vector voltmeter[1]
- Interference analyzer
- Real-time spectrum analyzer (RTSA)
- Over-the-air (OTA) LTE FDD/TDD
- Over-the-air (OTA) 5G NR
- Phase array antenna support
- Indoor and outdoor mapping
- Extended range transmission analysis (ERTA)
- Pulse measurement
- Analog demodulation
- Noise figure (NF) measurements
- Built-in variable DC voltage source
- Frequency counter measurements
- Electromagnetic field (EMF) measurements
- TDR Cable measurements[1]
- Built-in GPS receiver
- ECal support[1]

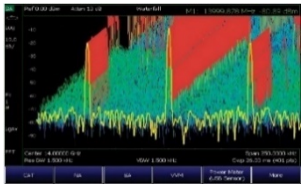
1. For N995xB combo analyzers only



RTSA for linear FM chirp RADAR signal tests



Simultaneously measure and view all four S-parameters up to 54 GHz



Waterfall display for interference detection

5G NR multi-cell measurements

Product highlights

Rugged and weather resistant:

- Meets MIL-PRF-28800F Class 2 requirements
  - no vents, wide operating temperature of -10 to +55°C (14 to 131°F)
- Meets IEC/EN 60529 IP53 requirements
- Type tested and meets Procedure 1 requirements for operation in explosive environments. MIL-810G, Method 511.5

Portable: compact, lightweight 3.34 kg/7.35 lb package

Combination and signal analyzers:

- Signal analyzer provides best amplitude accuracy of ±0.2 dB, with no warm-up required
- Real-time spectrum analyzer (RTSA) with up to 120 MHz bandwidth and 5.52 µs minimum signal duration with 100% POI at full amplitude accuracy
- VNA CalReady allows quick and accurate microwave device measurements in the field
- Full-band tracking generator up to 54 GHz
- Options and 25+ apps are all customer upgradeable

More Information: www.keysight.com/find/fieldfox

FieldFox microwave analyzer options

Model number	Description
N9950B/51B/52B/53B	FieldFox Handheld Microwave Analyzer, 32/44/50/54 GHz
N9960B/61B/62B/63B	FieldFox Handheld Microwave Signal Analyzer, 32/44/50/54 GHz
Option number	**Features**
CAT/Vector network analysis*	
010	Vector network analyzer time domain
210	Vector network analyzer transmission/reflection
211	Vector network analyzer full 2-port S-parameters
212	1 port mixed-mode S-parameters
215	TDR cable measurements
308	Vector voltmeter
Spectrum analysis (Refer to the FieldFox Configuration Guide for a complete option list)	
209	Extended range transmission analysis (ERTA)
220	Tracking generator
233	Spectrum analyzer
235	Preamplifier
236	Interference analyzer and spectrogram
238	Spectrum analyzer time gating
312	Channel scanner
350	Real-time spectrum analyzer (RTSA)
352	Indoor and outdoor mapping
355	Analog demodulation
356	Noise figure (NF)
358	EMF measurements
360	Phase array antenna support
370	Over-the-air (OTA) LTE FDD
371	Over-the-air (OTA) LTE TDD
378	Over-the-air (OTA) 5G NR
B04/B10	Analysis bandwidth, 40 MHz/120 MHz
Power measurements	
208	USB power sensor measurements versus frequency
302	USB power sensor support
310	Built-in power meter
330	Pulse measurements with USB peak power sensor
System features	
030	Remote control capability
307	GPS receiver
309	DC bias variable-voltage source
-	Frequency extender support
Windows based software	
89601B	PathWave VSA (89600 VSA) software
N6820ES	Surveyor 4D software

1. For N995xB combo analyzers only

Key specifications

The specifications and measurement capabilities listed in this document may require certain options on the FieldFox analyzer. Refer to the FieldFox Configuration Guide (5992-3701EN) to obtain option information, and to the FieldFox Data Sheet (5992-3702EN) for detailed performance information.

Function	Description
N9950B/51B/52B/53B	FieldFox Handheld Microwave Analyzer, 32/44/50/54 GHz
N9960B/61B/62B/63B	FieldFox Handheld Microwave Signal Analyzer, 32/44/50/54 GHz
Cable antenna analyzer and vector network analyzer	
Frequency	300 kHz to 32 GHz, 44 GHz, 50 GHz, 54 GHz
System dynamic range	Up to 121 dB
Output power	7 dBm to -50 dBm
Trace noise	0.008 dB
Spectrum analyzer	
Frequency	9 kHz (usable to 5 kHz) to 32 GHz, 44 GHz, 50 GHz, 54 GHz
Display Average Noise Level (DANL)	-163 dBm @ 2 GHz; -154 dBm @ 32 GHz; -142 dBm @ 50 GHz
Third-Order Intercept (TOI)	+9.7 dBm @ 2.4 GHz
Spurious free dynamic range	>104 dB
Phase noise	-114 dBc/Hz @ 10 kHz offset (for 1 GHz carrier)
Preamplifier	100 kHz up to 54 GHz
Real-time spectrum analyzer	
Frequency	5 kHz up to 54 GHz
Maximum real-time bandwidth	120 MHz
Minimum signal duration with 100% POT at full amp. accuracy	5.52 µs
Display views	Density, Spectrogram, Spectrum
Independent source	
Frequency	300 kHz up to 54 GHz
General	
Environmental	Meets MIL-PRF-28800F Class 2, type test for IP53
Temperature	Operating: -10 to +55°C (14 to 131°F)
Dimension and weight	11.5" x 7.4" x 3.2" (292 x 188 x 82 mm3), 3.34 kg/7.35 lb

Accessories

Model number	Description
N9910X	FieldFox accessories: Adapters, antennas, cables, etc.
N9911X	Economical waveguide calibration components

Learn more at: www.keysight.com

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