

Keysight FieldFox Microwave Analyzers

4/6.5/9/14/18/26.5/32/44/50 GHz

Now Delivers Real-time Spectrum Analysis and MIL-Spec Durability to Field Applications

Keysight FieldFox handheld analyzers are the world's most integrated and precise analyzers -- the first to deliver benchtop accuracy up to 50 GHz in a portable, rugged package. Now, FieldFox is going further by adding real-time spectrum analysis (RTSA) capability. The FieldFox base combination model functions as a cable and antenna tester and can be configured to include a spectrum analyzer, RTSA, full 2-port network analyzer, and more.



Key features

- Cable and antenna analyzer (return loss/distance-to-fault)
- Spectrum analyzer
- Full 2-port vector network analyzer
- Built-in power meter
- Independent signal generator
- Vector voltmeter
- Interference analyzer
- Real-time spectrum analyzer (RTSA)
- Pulse measurements
- Built-in variable DC voltage source
- Frequency counter measurements
- TDR cable measurements
- Built-in GPS receiver
- ECal support
- Extended range transmission analysis

Product highlights

- Rugged and weather resistant:
 - Meets MIL-PRF-28800F Class 2, no vents or fans, wide operating temp 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, light-weight 3.2 kg/7.1 lb package
- Combination analyzers:
 - Spectrum analyzer provides best amplitude accuracy of 0.5 dB, with no warm up required
 - Real-time spectrum analyzer (RTSA) with 10 MHz bandwidth and minimum detectable signal as short as 22 ns
 - VNA CalReady allows quick and accurate microwave device measurements in the field
 - Built-in microwave independent signal source with flattened power output makes system verification easier in the field
 - Full-band tracking generator
- Standard 3-year warranty

FieldFox microwave analyzer options

Model number	Description
N9913A	FieldFox Handheld Microwave Analyzer, 4 GHz
N9914A	FieldFox Handheld Microwave Analyzer, 6.5 GHz
N9915A	FieldFox Handheld Microwave Analyzer, 9 GHz
N9916A	FieldFox Handheld Microwave Analyzer, 14 GHz
N9917A	FieldFox Handheld Microwave Analyzer, 18 GHz
N9918A	FieldFox Handheld Microwave Analyzer, 26.5 GHz
N9950A	FieldFox Handheld Microwave Analyzer, 32 GHz
N9951A	FieldFox Handheld Microwave Analyzer, 44 GHz
N9952A	FieldFox Handheld Microwave Analyzer, 50 GHz
Option	Feature
CAT/vector network analysis	
010	Vector network analyzer time domain
112	QuickCal (N991xA only)
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
320 (standard)	Reflection measurements (RL, VSWR and scalar)
Spectrum analysis	
209	Extended range transmission analysis (ERTA)
210 (+233)	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)
355	Analog demodulation
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

Key specifications

The specifications and measurement capabilities listed in this document require certain options on the FieldFox analyzer. Refer to the FieldFox Configuration Guide to obtain option information. The configuration guide (<http://literature.cdn.keysight.com/litweb/pdf/5990-9836EN.pdf>) is the main resource for option/measurement capability information.

Function	Description
Cable antenna analyzer and vector network analyzer	
Frequency	300 kHz to 32 GHz, 44 GHz, 50 GHz
Dynamic range	Up to 110 dB
Output power	4 dBm to -53 dBm
Trace noise	0.008 dB
Spectrum analyzer	
Frequency	9 kHz (usable to 5 kHz) to 32 GHz, 44 GHz, 50 GHz
Displayed Average Noise Level (DANL)	-155 dBm @ 2 GHz; -147 dBm @ 32 GHz; -135 dBm @ 50 GHz
Third-Order Intercept (TOI)	15 dBm @ 2.4 GHz
Spurious free dynamic range	>105 dB
Phase noise	-111 dBc at 10 kHz offset
Preamplifier (optional)	100 kHz up to 50 GHz
Real-time spectrum analyzer (RTSA)	
Frequency	5 kHz to up to 50 GHz
Maximum real-time bandwidth	10 MHz
Minimum signal duration with 100% POI at full amplitude accuracy	12.2 μ s
Display views	Density, Spectrogram, Spectrum
Independent source	
Frequency	300 kHz up to 50 GHz
General	
Environmental	Meets MIL-PRF-28800F Class 2, type tested for IP53
Temperature	Operating: -10 to +55 °C (14 to 131 °F)
Dimensions and weight	11.5" x 7.4" x 2.8" (292 x 188 x 72 mm), 3.2 kg/7.1 lb with battery

Accessories

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