Keysight Technologies
Carry precision with you! – FieldFox –

30 kHz to-50 GHz high-performance, portable network analyzer and spectrum analyzer

When high-precision microwave measurement was needed, the only choice has been a benchtop instrument. The FieldFox series lets you have a network analyzer and spectrum analyzer that can measure up to 50 GHz. With the lightweight of 3.2 kg and battery life of 3.5 hours, the instrument can be carried around and placed close to the object to be measured to achieve more efficient characterization. The price is significantly lower than benchtop instruments. FieldFox is useful. Not only outdoor, but it supports you also at the R&D bench as an additional analyzer.
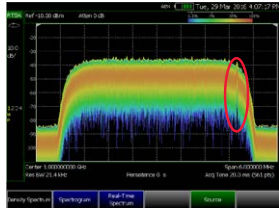
NEW! The world's first real-time spectrum analyzer is added as an option

The high detection capacity with 100% probability of intercept (POI) duration of approximately 12 µs and the minimum detected signal length of 1 µs allows radar wave analysis and short signal detection. The high-performance function captures signals that have escaped before and provides handheld solution to problems that have been difficult in the past.
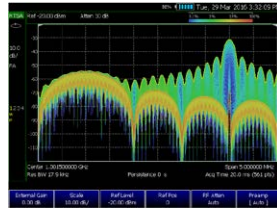The option can be added to a FieldFox instrument you already have. For initial hardware, this option can be used by upgrading the CPU.

Easy understanding of sequence of radar signal

Easy detection of interfering waves and threat signals

Easy recognition of multiple pulse signals separation

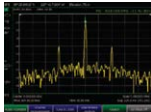| Features	Specifications
100% POI duration	12.2 µs
Minimum detectable signal duration	< 1 µs
Real-time bandwidth	10 MHz
Amplitude accuracy	0.8 dB - 1.4 dB
Record and playback	Available
Display modes	Trace, spectrogram, density spectrum

1. Vector network analyzer
– All four S-parameters, magnitude and phase
– Easy operation of high-precision calibration
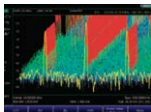– Dynamic range: 100 dB @ 10 MHz-20 GHz

2. Spectrum analyzer
– Able to measure from 5 kHz
– DANL: −136 dBm @ 35-40 GHz,Pre-amp on
– High accuracy: ±0.8 dB @ 15 MHz-32 GHz
– Enhanced phase noise: −106 dBc/Hz, 10 kHz offset

3. Interference analyzer
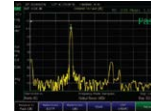– Interference analysis, recording and playback using spectrogram and waterfall

4. Real-time spectrum analyzer
– 100% POI duration is approximately 12 µs and minimum detectable signal duration is 1 µs

Equipped with display mode for clear viewing in direct sunlight or darkness

Backlit keypad

Field-swappable batteries

LAN port for data transfer and SCPI programming

USB ports and SD card for easy data storage

5. Cable and antenna analyzer
– Return loss, VSWR, distance-to-fault measurement, cable loss, TDR impedance
– Measurement can start as soon as the power is turned on (CalReady)

6. Power meter function
– Built-in power meter or USB power sensor
– The built-in power meter has ±0.5 dB accuracy (typical) with InstAlign
– USB power sensor and signal source for scalar NA

7. Vector voltmeter
– Cable trimming, phase shift, electrical length measurements
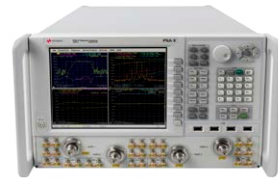– A/B and B/A ratio measurements

8. Built-in signal source
– Spectrum analyzer function enables operation of full- band signal source
– CW and CW synchronized with sweep
– Tracking generator
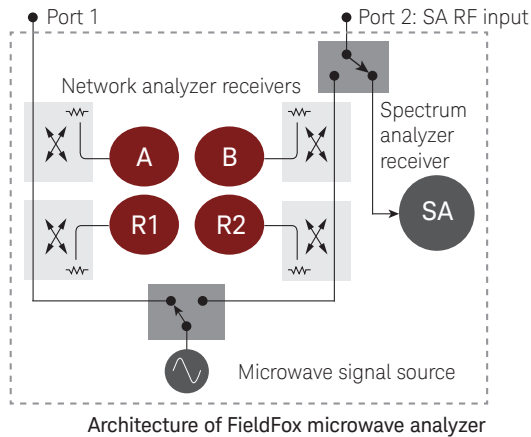
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High performance that can correlate to PNA network analyzer

– Equipped with a calibration routine same as that of a high-performance PNA network analyzer to achieve correlated measurement
– Uncertainties are mostly same as 8753 and 8720
– Unknown Thru calibration is achieved with four-receiver composition
– Capable also of full two-port calibration and waveguide measurement

Technologies that support FieldFox

Advanced architecture that achieves multi-functions and high performance

Architecture of FieldFox microwave analyzer

– Built-in independent signal source, four network analyzer receivers, and spectrum analyzer receiver
– Unknown Thru calibration achieved with four-receiver composition
– The spectrum analyzer receiver operates also as a built-in power meter
– InstAlign function: Calibrates the spectrum analyzer receiver and built-in power meter using the signal source to achieve high accuracy

With a lightweight and durable case, the instrument can be used - wherever you need to go

– Lightweight of 3.2 kg and battery operation of 3.5 hours
– Dust-proof fanless structure, drip-proof design (IP53 certified), and low failure rate
– Passed six-faces, 90 cm drop-tests
– Compact body allows comfortable work even on your limited bench space

Easy and simplified calibration of network analyzers: CalReady and QuickCal functions

– Calibration before measurement is essential for a network analyzer. FIeldFox is calibrated with the measurement port (CalReady capability), allowing measurement to start as soon as the power is turned on
– Electronic calibration kit can be added inside (optional QuickCal capability), which eliminates the need to reconnect a mechanical calibration kit to simplify the calibration task (only for Type N and Type 7/16)
– Available for network analyzers, cable and antenna analyzers
– Electronic calibration kit for benchtop products can be used
– Waveguide calibration kit can be used (QSOLT is available)

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at:
www.keysight.com/find/contactus

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