Make ideas real



## **R&S®FSH HANDHELD SPECTRUM ANALYZER**

# The all-in-one handheld platform



### The perfect choice for

Installation and maintenance of transmitter stations

EMI debugging/ RF design validation

Interference hunting

Electromagnetic fields measurements

Key specifications	
Frequency range	9 kHz to 3.6/8/13.6/20 GHz 100 kHz to 3.6/8 GHz
Resolution bandwidth	1 Hz to 3 MHz
Demodulation bandwidth	20 MHz
Phase noise	95 dBc/Hz; -105 dBc/Hz (typ.)
Measurement uncertainty	< 1 dB (typ.)
Displayed average noise level (DANL)	R&S°FSH4 & R&S°FSH8 -157 dBm; -161 dBm (typ.) R&S°FSH13 & R&S°FSH20 -155 dBm; -159 dBm (typ.)
Third order intercept (TOI)	R&S°FSH4 only > +10 dBm; +15 dBm (typ.) R&S°FSH8/FSH13/FSH20 > +3 dBm; +10 dBm (typ.)

### Expandable platform that eliminates the need for multiple instruments

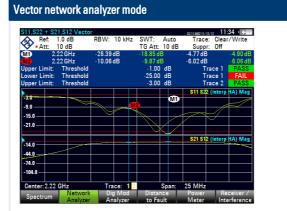
Depending on the model and options installed, the R&S°FSH can be a

- ▶ Spectrum analyzer
- ► Interference hunting analyzer
- Cable and antenna analyzer
- ► Two-port vector network analyzer
- ▶ Power meter

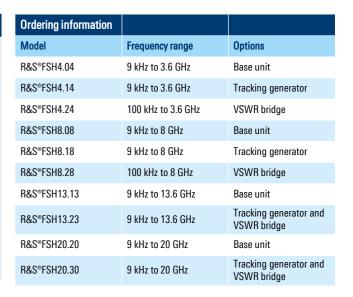
Your benefit **Features** An expandable platform for every RF handheld Expanded modes of operation for field strength measurements, power measurements, network analysis, measurement application interference analysis, vector voltmeter, pulse measurements Modulation analysis for cellular technologies, including over-the-air LTE-Advanced carrier aggregation Extensive support for numerous wireless technologies signal analysis ► Sunlight readable display Generation of user-defined test sequences (R&S®FSH wizard) Most efficient instrument in the field ► Remote control and data export with free R&S®Instrument View software ► Fast measurement mode switching ► SD card and USB port for data storage

#### Supports numerous mobile comm. standards 12/06/15 13:25 = Ref Level: -60.0 dBm Ref Offset: 0.0 dB Antenna: M 2x2 / OTA Cell [Grp/ID]: 379 [126/1] 0.0 dB Subframes: 10 Cyclic Prefix: Auto Cell ID status: PASS Preamp: On LTE(B 3) 10 MHz (50 RB) Channel BW: 20 MHz (100 RB) -80.47 dBm -72.56 dBm 2.48 kHz -104.40 dBm Spectrum Overview 1.68 kHz Isotropic Antenna 379 [126/1] Constellation Diagram Resource Allocations 100.59 dBm BTS Scanner 110 50 % 134 97 % 0.00 s -99.24 dBm 115.12 % 0.00 s Limits -102.18 dBm Carrier Aggregatio -6.11 ns

Modulation measurements on GSM/GPRS/EDGE, W-CDMA, TD-SCDMA CDMA2000, 1xEV-DO, LTE TDD, LTE FDD



For cable loss and antenna testing and characterization as well as distance to fault measurements. Two-port capability for transmission measurements



**Included:** All models include lithium-ion battery pack, LAN and USB cables, AC power supply, CD-ROM with and documentation, quick start guide and three-year warranty (one year for battery and accessories)

Popular accessories	
Description	Item
Spectrum analyzer preamplifier	R&S®FPH-B22
Interference analysis	R&S®FPH-K15
Lithium-ion battery pack, 6.75 Ah	R&S®HA-Z206
Soft carrying bag	R&S®HA-Z220
Hard case	R&S®HA-Z221
Near-field probe set	R&S®HZ-15
Yagi antenna, 824 MHz to 960 MHz	R&S®HA-Z900
Yagi antenna, 1710 MHz to 1990 MHz	R&S®HA-Z1900

### Wizard support for common measurement functions

-23.55 dB -39.16 dB	<b>M</b> 2	9.42 m	-26.58 dB S11 (fcal) Mag
			S11 (fcal) Mag
			M2 A
<b>M</b> 3			
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ا ما	I m M	$\sim$	VV
A MMAA	M A		
	N MAN	N May May M	V WWW WWW

User-definable test sequences that reduce operating errors in the field.

#### Remote control via LAN or USB



The R&S®FSH can be remotely controlled via the USB or LAN interface and integrated into user-specific programs.



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