

Quick Fact Sheet

Field Master™ MS2080A

Handheld RF Spectrum Analyzer

9 kHz to 4/6 GHz



RF Spectrum Analyzer with Real-Time Option

Anritsu's Field Master MS2080A RF Spectrum Analyzer is designed to offer the performance you need with the toughness required in a field portable instrument. Developed with 20 years' experience of designing RF test instruments for field technicians, the Field Master MS2080A integrates a spectrum analyzer, real-time spectrum analyzer (RTSA), cable and antenna analyzer, and WCDMA LTE/5G base station tester into a single battery powered instrument.

Full span sweep speeds of 45 GHz/s coupled with -160 dBm DANL and ± 1 dB level accuracy delivers performance previously reserved for the lab into the field. Results and instrument settings are clearly displayed on a large 10-inch, high resolution multi-touch screen. The soft case provides an IP52 rating to protect from dust and rain while the screen exceeds the IK08 specification protecting against the knocks and drops inevitably experienced in the field. The 5 watts maximum input power prevents accidental power overload damage, which is the most common cause of field failures.

With the increase in RF communication systems, interference has become the biggest challenge for many operators. The Field Master MS2080A offers an array of features to identify and locate sources of RF interference. Its super-fast sweep speed used with a directional antenna enable rapid location of interferers. AM/FM audio demod help identify the source of the interferer while adding Anritsu's InterferenceHunter™ MA2700A handle with eCompass pinpoints the location on a digital map.

Validate cellular network performance with LTE WCDMA and 5G base station measurement options. Cell site coverage is simplified with the coverage mapping option, highlighting coverage from individual PCIs. Add a Site Master S331P cable and antenna analyzer to complete the base station test capability.

The Field Master MS2080A delivers faster measurements in a field portable instrument with a comprehensive array of features for interference hunting and cellular base station testing.

Field Master MS2080A Highlights

Spectrum Analysis from 9 kHz to 4/6 GHz	For coverage of common commercial RF communications bands
Spectrogram	To capture and record intermittent and drifting signals
RTSA	For real-time spectrum analysis with 2 μ s POI
AM/FM Modulation Measurements	Simultaneous display of RF spectrum, Audio spectrum, Audio oscilloscope, Modulation quality, SINAD and THD
TDR Measurements in CAA Mode	TDR Ohm and TDR Linear measurements
Smart Measurements	Includes channel power, occupied bandwidth, adjacent channel power, spectral emissions, C/I, and field strength measurements
Spectrum Record and Playback	To record traces and playback at slow speed to track all spectrum activity
Channel Scanner	Horizontal bar chart or strip chart with channels up to 60
USB Power Sensor Support	For precision power measurements of transmitters
Site Master Cable and Antenna Analyzer	For RF cable and antenna testing at transmitter sites
Zero Span	For pulse measurements
IQ Capture and Streaming	Up to 40 MHz Bandwidth
Quasi-Peak Detector	For CISPR compliant interference measurements
Interference Hunting	With directional antenna and eCompass handle
Cellular Measurements	WCDMA, 5GNR FR1 and LTE FDD/TDD transmitter measurement suites
10-Inch Multi-Touch Display	Provides quick and easy configuration and results presentation
GNSS	GPS, Galileo, GLONASS, BeiDou
Connectivity	Ethernet, Wi-Fi, USBTMC, 2 x USB 3.0
Report Generator	Built in PDF/HTML report generator for CAA traces, screen captures and images
LTE/5G/WCDMA	TDD Uplink interference with gated spectrum



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Multiple Instruments in One

Spectrum Analyzer
Real-time Spectrum Analyzer (RTSA)
Interference Analyzer
Channel Scanner
True Power Meter
TDR Measurements in CAA Mode
Cable and Antenna Analyzer
AM/FM Modulation Measurements
LTE FDD/TDD Base Station Analyzer
WCDMA Analyzer
5GNR FR1 Base Station Analyzer
Coverage Mapping
IQ Waveform Capture/Streaming

Key Specifications

Performance	
Sweep Speed	32 GHz/s, 45 GHz/s with Option 102
Phase Noise	-95 dBc/Hz @ 1 GHz Freq and 100 kHz Offset
DANL	< -160 dBm (with pre amp)
Input Damage Level	5 Watts
Measurement Range	DANL to +30 dBm
Frequency Accuracy	Aging: $\pm 1.0 \times 10^{-6}$ per Year Accuracy: $\pm 2.8 \times 10^{-7}$ (-10 °C \pm 55°C) Plus Aging
Amplitude Accuracy	± 1 dB (± 0.5 dB typical)
Resolution Bandwidth in Sweep Mode	1 Hz to 5 MHz
Resolution Bandwidth in Zero Span	10 Hz to 40 MHz
RTSA Bandwidth	40 MHz

Key Features

Feature	Specifications
Display	10.1 in, 1280 x 800 Color Capacitive Touchscreen
Traces	6 (with Trace Record and Play Back)
Detectors	Avg/RMS, Peak, Negative, Sample, Normal
Gated Sweep	For Time Gated Measurements
Markers	12 Markers Assignable to Any Trace
Limit Lines	Complex Limit Lines with Pass/Fail
Connectivity	Ethernet, USBTMC, 802.11 Wi-Fi
GNSS	GPS, GLONASS, Galileo, BeiDou
Audio Measurements	AM/FM modulation quality, audio spectrum, audio oscilloscope, THD and SINR
Battery Life	3 Hours with Internal, 6 Hours with Accessory Power Pack
Size	290 mm x 212 mm x 96 mm, (11.4 in x 8.3 in x 3.7 in)
Weight	3.8 kg (8.39 lb)

Instrument Options

Option Number	Description
MS2080A	Field Master Spectrum Analyzer (must be ordered with ONE frequency option)
Options	
MS2080A-0704	Frequency Range 9 kHz to 4 GHz
MS2080A-0706	9 kHz to 6 GHz Spectrum Analyzer
MS2080A-0003*	Time Domain Reflectometry (TDR) Measurement (requires S331P, sold separately)
MS2080A-0017	Secure Communication
MS2080A-0019*	High Accuracy Power Meter (requires USB sensor, sold separately)
MS2080A-0024*	Interference Finder (Option 31 and directional antenna recommended, sold separately)
MS2080A-0027*	Channel Scanner
MS2080A-0031*	Option 31, GNSS Receiver (requires GNSS antenna, sold separately)
MS2080A-0090*	Option 90, Gated Sweep
MS2080A-0102*	Option 102, 40 MHz Analysis Bandwidth
MS2080A-0199*	Option 199, Real-time Spectrum Analysis (RTSA)
MS2080A-0400*	Option 400, Enable Vision Monitor
MS2080A-0407*	Option 407, Enable Vision High-Speed Port Scanner
MS2080A-0431*	Option 431, Coverage Mapping (requires Option 31. Cannot be ordered with Option 9031)
MS2080A-0444*	Option 444, EMF Measurement
MS2080A-0509*	Option 509, AM/FM Modulation Measurements
MS2080A-0871*	WCDMA FDD Measurements (requires Option 31)
MS2080A-0883*	Option 883, LTE FDD/TDD Measurements (requires Option 31)
MS2080A-0888*	Option 888, 5G NR Downlink Measurements (requires Option 31)
MS2090A-xxxx-0097	Accredited Calibration to ISO17025 and ANSI/NCSL Z540-1 (xxxx is the frequency option number)
MS2090A-xxxx-0098	Standard Calibration to ISO17025 and ANSI/NCSL Z540-1 (xxxx is the frequency option number)
MS2090A-xxxx-0099	Premium Calibration to ISO17025 and ANSI/NCSL Z540-1 plus test data (xxxx is the frequency option number)

* Refer to the Technical Data Sheet for full specifications and information on ordering time limited options.