Quick Fact Sheet

Field Master Pro™ MS2090A

9 kHz to 9/14/20/26.5/32/43.5/54 GHz

Anritsu
Advancing beyond

High-Performance Spectrum Analyzer with Real-Time Option

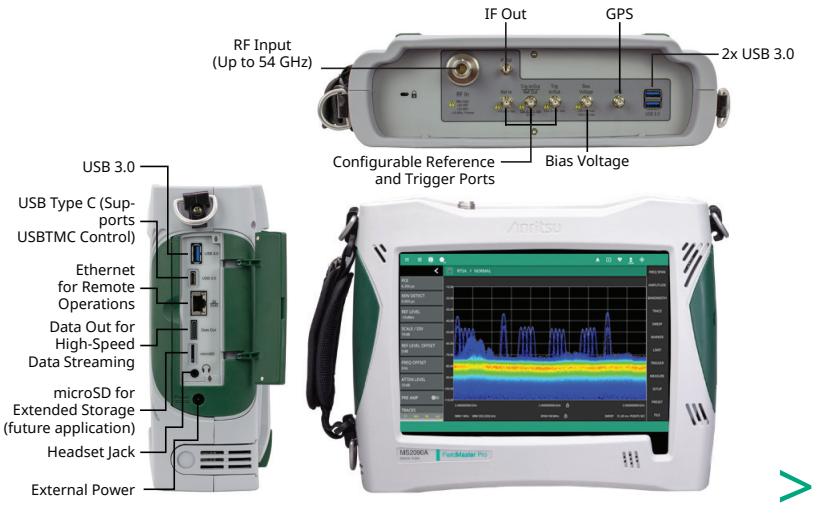
Anritsu's Field Master Pro MS2090A high-performance spectrum analyzer with real-time spectrum analyzer (RTSA) option delivers performance never previously available in a compact, handheld instrument. Optional S331P cable and antenna analyzer provides fast and easy verification of cables and antennas up to 6 GHz. With continuous frequency coverage from 9 kHz to 54 GHz, the Field Master Pro MS2090A is specifically designed to meet the challenges of 5G testing while maintaining support for a full range of other wireless technologies in use today, including: wireless backhaul, aerospace/defense, satellite systems, and radar.

The Field Master Pro MS2090A delivers the highest levels of RF performance available in a handheld, touchscreen spectrum analyzer, with a displayed average noise level (DANL) of –164 dBm and Third-Order-Intercept (TOI) of +20 dBm (typical). This makes measurements such as spectrum clearing, radio alignment, harmonic, and distortion even more accurate than previously possible. For modulation measurements on digital systems, 150 MHz modulation bandwidth coupled with best-in-class phase noise performance maximizes measurement precision, while ±0.5 dB typical amplitude accuracy provides confidence when testing transmitter power and spurious.

Ruggedized for field use, all versions provide a comprehensive range of features to speed and simplify measurement as well as enhance usability. The RTSA options offer spans of 22, 55, 120, and 150 MHz to provide capability for cellular interference monitoring to full Industrial, Scientific, and Medical (ISM) band signal analysis. In addition to being a full span swept-tuned spectrum analyzer, all versions include a spectrogram display, integrated channel power and occupied bandwidth measurements. Options include Site Master cable and antenna analyzer, Pulse Analyzer and support for USB high accuracy power sensors.

Field Master Pro MS2090A Highlights

- 9 kHz to 9/14/20/26.5/32/43.5/54 GHz
- RTSA Bandwidth: 22 MHz (standard) up to 150 MHz (optional)
- RTSA POI: 22 MHz = 7 µs, 55 MHz = 4.45 µs, 120 MHz = 2.06 µs
- DANL: –164 dBm (with Preamp)
- TOI: +20 dBm (typical)
- Demodulation: 5G NR (SSB Modulation Quality), LTE (FDD/TDD), DSS
- Zero Span with 60 ns Minimum Sweep Time
- Amplitude Accuracy at <14 GHz: ±1.3 dB (±0.5 dB, typical)
- IQ Capture and Streaming Up to 150 MHz Bandwidth
- EMF Measurements
- Pulse Analyzer
- Vector Signal Analyzer with PC Software
- Channel Scanner: Bar Chart, Strip Chart, Mapping Displays with Up to 60 Channels.
- Coverage Mapping Option (Channel Power, RSSI, RSRP, RSRQ, SINR)
- Interference Triangulation with Interference Hunter MA2700A
- Cable and Antenna Analyzer from 150 kHz to 6 GHz with S331P
- English, Chinese, Japanese, Korean, Spanish, French Language GUI Support
- Built-in PDF/HTML Report Generator for CAA Traces, Screen Captures and Pictures
- LTE/5G WCDMA TDD/FDD Uplink Interference with Gated Spectrum



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Key Specifications

Performance	
Frequency Range	MS2090A-0709 – 9 kHz to 9 GHz MS2090A-0714 – 9 kHz to 14 GHz MS2090A-0720 – 9 kHz to 20 GHz MS2090A-0726 – 9 kHz to 26.5 GHz MS2090A-0732 – 9 kHz to 32 GHz MS2090A-0743 – 9 kHz to 43.5 GHz MS2090A-0754 – 9 kHz to 54 GHz
DANL (w/Preamp)	–164 dBm
TOI	+20 dBm
Analysis Bandwidth	Up to 150 MHz
Demodulation	5G NR SSB measurements (RSRP, RSRQ, SINR, EVM); LTE (FDD/TDD); WCDMA
Amplitude Range	DANL to +30 dBm
Phase Noise at 1 GHz	–110 dBc/Hz @ 100 kHz Offset (typical)
Resolution Bandwidth (RBW)	1 Hz to 10 MHz with 0.1 Hz resolution
Input SWR	1.5:1
Amplitude Accuracy	<14 GHz ±1.3 dB (±0.5 dB, typical)
RTSA Bandwidth	22 MHz, 55 MHz, 120 MHz or 150 MHz (option dependent)

Key Features

Feature	Specification
Display	10.1 in, 1280 x 800, color capacitive touchscreen
Traces	Six (with Trace Record and Playback)
Detectors	Peak, RMS/Avg, Negative, Sample, Normal
Gated Sweep	For Time Gated Spectrum measurements
Markers	12 markers assignable to any trace
Limit Lines	Complex limit lines with Pass/Fail
IQ Capture	Comprehensive IQ Capture and Streaming
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	>2 Hours (function dependent)
Size	314 mm x 235 mm x 95 mm (12.4 in x 9.25 in x 3.74 in)
Weight	MS2090A-0709, –0714, –0720: 5.06 kg (11.15 lb) MS2090A-0726, –0732, –0743, –0754: 5.4 kg (11.9 lb)

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Instrument Options

Option Number	Description
MS2090A-0709	Spectrum Analyzer, 9 GHz
MS2090A-0714	Spectrum Analyzer, 14 GHz
MS2090A-0720	Spectrum Analyzer, 20 GHz
MS2090A-0726	Spectrum Analyzer, 26.5 GHz
MS2090A-0732	Spectrum Analyzer, 32 GHz
MS2090A-0743	Spectrum Analyzer, 43.5 GHz
MS2090A-0754	Spectrum Analyzer, 54 GHz
MS2090A-0003*	Time Domain Reflectometry (TDR) Measurement (requires Option 331)
MS2090A-0006	Remove Wi-Fi and Bluetooth
MS2090A-0007	Secure Data
MS2090A-0017*	Secure Communication
MS2090A-0019*	High Accuracy Power Meter (requires USB sensor, sold separately)
MS2090A-0024*	Interference Finder (Option 31 and directional antenna recommended, sold separately)
MS2090A-0027*	Channel Scanner
MS2090A-0031*	GNSS Receiver (requires GNSS antenna, sold separately)
MS2090A-0089*	Zero Span IF Out
MS2090A-0090*	Gated Sweep
MS2090A-0103*	55 MHz Analysis Bandwidth
MS2090A-0104*	120 MHz Analysis Bandwidth
MS2090A-0105*	150 MHz Analysis Bandwidth
MS2090A-0124*	IQ Waveform Capture (includes MX280005A IQ Signal Master base feature set)
MS2090A-0125*	IQ Waveform Streaming (includes MX280005A IQ Signal Master base feature set) (requires Option 124)
MS2090A-0126*	IQ Waveform Capture (includes MX280005A IQ Signal Master base feature set) (non-export controlled)
MS2090A-0127*	IQ Waveform Streaming (includes MX280005A IQ Signal Master base feature set) (requires Option 126, non-export controlled)
MS2090A-0128*	Enable Vector Signal Analysis (requires Option 124 or 126)
MS2090A-0199*	Real-Time Spectrum Analysis (RTSA)
MS2090A-0331*	Enable S331P Site Master (requires S331P, sold separately)
MS2090A-0400*	Enable Vision Monitor
MS2090A-0401*	Enable Vision Locate (requires Option 400)
MS2090A-0407*	Enable Vision High-Speed Port Scanner
MS2090A-0421*	Pulse Analyzer
MS2090A-0431*	Coverage Mapping (requires Option 31)
MS2090A-0444*	EMF Measurement (requires Anritsu isotropic antenna, sold separately)
MS2090A-0445*	Enable EMF Meter
MS2090A-0509*	AM/FM Modulation Measurements
MS2090A-0871*	WCDMA FDD Measurements (requires Option 31)
MS2090A-0883*	LTE FDD/TDD Measurements (requires Option 31)
MS2090A-0888*	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.*