

# 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

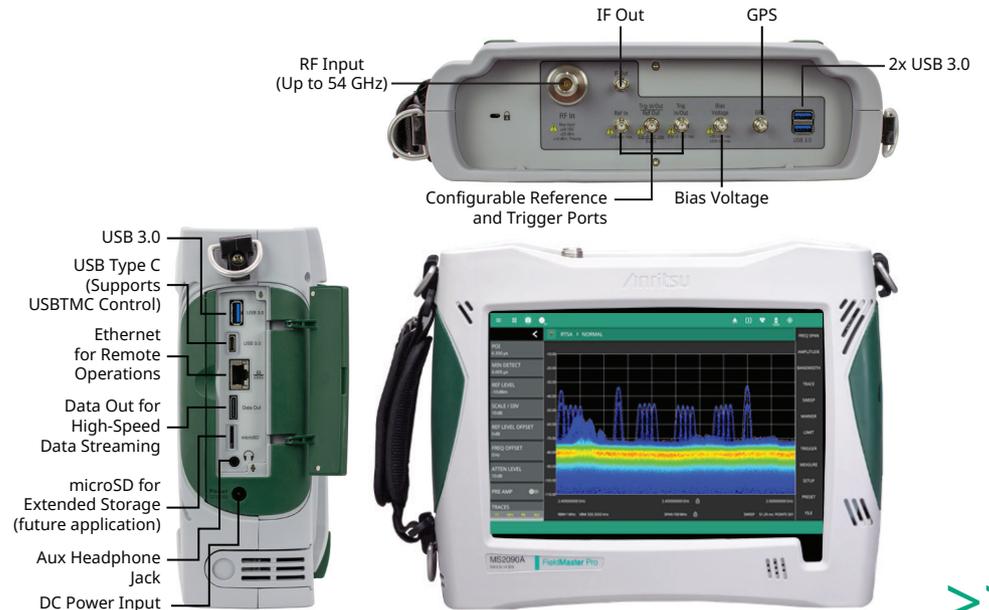
Anritsu's Field Master Pro MS2090A high-performance spectrum analyzer with real-time spectrum analyzer (RTSA) option delivers performance never previously available in a compact, handheld instrument. Optional S331P cable and antenna analyzer provides fast and easy verification of cables and antennas 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 test 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, 110 MHz modulation bandwidth coupled with best-in-class phase noise performance maximizes measurement precision, while  $\pm 0.5$  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, and 110 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: 20 MHz (Standard) up to 110 MHz (Optional)
- RTSA POI: 22 MHz = 7  $\mu$ s, 55 MHz = 4.45  $\mu$ s, 110 MHz = 2.06  $\mu$ s
- 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:  $\pm 1.3$  dB ( $\pm 0.5$  dB, Typical)
- IQ Capture and Streaming up to 110 MHz Bandwidth
- EMF Measurements
- Pulse Analyzer
- Vector Signal Analyzer with PC Software
- 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



# Quick Fact Sheet

## Field Master Pro™ MS2090A

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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 110 MHz
Demodulation	5G NR SSB Measurements (RSRP, RSRQ, SINR, EVM); LTE (FDD/TDD)
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, or 110 MHz (Option Dependent)

### Key Features

Feature	Specification
Display	10.1 in, 1280 x 800 Color Capacitive Touchscreen
Traces	6 (with Trace Record and Playback)
Detectors	Avg/RMS, Peak, Negative, 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	Frequency Range 9 kHz to 9 GHz
MS2090A-0714	Frequency Range 9 kHz to 14 GHz
MS2090A-0720	Frequency Range 9 kHz to 20 GHz
MS2090A-0726	Frequency Range 9 kHz to 26.5 GHz
MS3090A-0732	Frequency Range 9 kHz to 32 GHz
MS2090A-0743	Frequency Range 9 kHz to 43.5 GHz
MS2090A-0754	Frequency Range 9 kHz to 54 GHz
MS2090A-0006	Remove Wi-Fi
MS2090A-0019	High Accuracy Power Meter (Requires USB Sensor, Sold Separately)
MS2090A-0024	Interference Finder (requires GNSS Receiver Option 31 and directional antenna, sold separately)
MS2090A-0031	GPS Receiver (Requires GPS Antenna, Sold Separately)
MS2090A-0089	Zero Span IF Out
MS2090A-0103	55 MHz Analysis Bandwidth
MS2090A-0104	110 MHz Analysis Bandwidth
MS2090A-0124	IQ Waveform Capture
MS2090A-0125	IQ Waveform Streaming (Requires Option 124)
MS2090A-0126	IQ Waveform Capture (Non-Export Controlled)
MS2090A-0127	IQ Waveform Streaming (Non-Export Controlled, Requires Option 126)
MS2090A-0128	Vector Signal Analysis Enabled
MS2090A-0199	Real-Time Spectrum Analyzer
MS2090A-0331	Site Master S331P Enabled (Requires S331P, Sold Separately)
MS2090A-0400	Vision Monitor Enabled
MS2090A-0421	Pulse Analyzer
MS2090A-0431	Coverage Mapping
MS2090A-0444	EMF Measurement (Frequency Selective, Requires Anritsu Isotropic Antenna)
MS2090A-0445	EMF Meter Enabled (Broadband, Requires 2000-1985-R Isotropic EMF Probe, 20 MHz to 40 GHz)
MS2090A-0509	AM/FM Modulation measurements
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)
MS2090xxx-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 information on ordering time limited options.