Quick Fact Sheet

Remote Spectrum Monitor MS27201A

9 kHz to 9/20/43.5 GHz

Anritsu
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High-Performance Spectrum Monitor with Remote PC GUI

The Remote Spectrum Monitor MS27201A from Anritsu is a new instrument designed to facilitate wide area spectrum monitoring up to 43.5 GHz. Building on over 40 years' experience in developing high-performance field portable spectrum analyzers, the Remote Spectrum Monitor MS27201A series is our highest frequency spectrum monitor covering all standard LMR, cellular, satellite, and defense electronic bands.

Designed specifically for long term monitoring applications the instrument is housed in a compact 2U tall 19 inch case and powered from a 15 Watt supply to minimize temperature gain. To ensure continuous and reliable operation, recovery features include a built in watchdog timer resets the instrument in the event of a software interruption and following a break in the power supply, the instrument will resume normal operation in the same state it was in prior to loss of power.

Applications for Remote Spectrum Monitor MS27201A instruments necessitate excellent noise floor for signal detection and high third-order intercept point (TOI) to minimize internal distortions when the input is exposed to multiple input signals. With a displayed average noise level (DANL) of -164 dBm and a TOI of typically +20 dBm, signal detection and measurement integrity are assured. Measurement bandwidths of up to 110 MHz with IQ capture and steaming options provide class leading functionality in a small form factor package.

Common use cases are: spectrum clearing when new licences are issued, shared spectrum monitoring for CBRS applications, satellite ground station downlink monitoring and critical infrastructure RF interference monitoring.

Remote Spectrum Monitor MS27201A Highlights

- 9 kHz to 9/20/43.5 GHz
- 19 inch rack mount case
- PC application user interface
- DANL: -164 dBm (with preamp)
- TOI: +20 dBm (typical)
- Analysis bandwidth: 110 MHz
- Amp range: DANL to +30 dBm
- Phase noise at 1 GHz: -110 dBc/Hz @ 100 kHz offset (typical)
- Demodulation: 5GNR, LTE FDD, RF, and modulation quality plus SSB signal analysis
- Resolution bandwidth (RBW): 1 Hz to 10 MHz
- Amplitude accuracy: < 14 GHz ± 1.3 dB (± 0.5 dB, typical)
- Zero span with 60 ns minimum span
- IQ capture and streaming

New Remote Spectrum Monitor to 43.5 GHz

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Key Specifications

Parameter	Specification
Frequency Range	9 kHz to 9/20/43.5 GHz
Analysis Bandwidth	110 MHz
TOI	+20 dBm
DANL (with pre amp)	–164 dBm
Amplitude Range	DANL to +30 dBm
Phase Noise @ 1 GHz	-110 dBc/Hz @ 100 kHz offset (typical)
RBW/VBW	1 Hz to 10 MHz
Amplitude Accuracy	< 14 GHz ±1.3 dB (±0.5 dB typical)

Key Features

Feature	Specification
Control Interfaces	Ethernet
PC Control	Remote GUI PC application
Automated Monitoring Software	MX280001A Vision monitor PC application
IQ	Capture and streaming IQ data through Ethernet, USB, and PCI interfaces
Cellular Modulation Quality Measurements	LTE and 5G NR
Continuous Operation and Recovery	Built-in watchdog timer and auto recover on power failure provide continuity of service
Traces	Six with independent detectors per trace
Markers and Limits	Intelligent markers and comprehensive limits
Event Capture	Save traces and alarms on defined events

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Instrument Options

Part Number	Description
MS27201A	Remote Spectrum Monitor (Requires Option 709, 720, or 743)
Options	
MS27201A-0709	Frequency Range 9 kHz to 9 GHz
MS27201A-0720	Frequency Range 9 kHz to 20 GHz
MS27201A-0743	Frequency Range 9 kHz to 43.5 GHz
MS27201A-0031	GPS Receiver (requires GPS antenna, sold separately)
MS27201A-0089	Zero Span IF Output
MS27201A-0090	Gated Sweep
MS27201A-0104	110 MHz Analysis Bandwidth
MS27201A-0124	IQ Waveform Capture
MS27201A-0125	IQ Waveform Streaming (requires Option 124 recommended)
MS27201A-0126	IQ Waveform Capture (non-export controlled)
MS27201A-0127	IQ Waveform Streaming (non-export controlled, requires Option 126 recommended)
MS27201A-0128	Vector Signal Analysis enabled (requires Option 124 or 126)
MS27201A-0400	Vision Monitor Enabled
MS27201A-0407	Vision High-Speed Port Scanner Enabled
MS27201A-0883	LTE FDD/TDD Measurements (requires GPS Option MS27201A-0031)
MS27201A-0888	5G NR FDD/TDD Measurement (requires GPS Option MS27201A-0031)
MS27201A-xxxx-0098	Standard Calibration to ISO17025 and ANSI/NCSL Z540-1 (xxxx is the frequency option number)
MS27201A-xxxx-0099	Premium Calibration to ISO17025 and ANSI/NCSL Z540-1 plus test data (xxxx is the frequency option number)

Supporting Software	
MX280005A	Vector Signal Analysis PC Software
MX280001A	Remote Spectrum Monitor Vision Software
MS27201A	PC Remote User Interface