

Remote Spectrum Monitor MS27103A For Remote RF Signal Monitoring

MS27103A 9 KHz to 6 GHz

Fast. Reliable. Accurate.

The Anritsu MS27103A is a multiple RF input spectrum monitor ideal for measuring signals from multiple antennas. The solution provides 12 RF input ports as a standard configuration and is typically used with a three-sector BTS cellular architecture with multiple carriers per sector. A high-speed switch is placed in the monitor to provide measurement capability for each RF input. This electronic switch can move from port to port in approximately 300 nS. A greater than 30 dB isolation is provided between each RF input port to assure the integrity of the measurement. Option 424 allows the MS27103A to be upgraded to 24 RF input ports.

With monitors potentially being deployed hundreds or thousands of kilometers from the control center, it is essential that each one remains operational under all types of conditions. The MS27103A is designed for robust field deployments with capabilities for remote power cycling, automated system recovery protocols, and firmware updates “pushed” to the monitor remotely.

Using three or more probes, Anritsu’s optional Vision™ software can be used to position an interferer signal or illegal broadcast. Additionally, IQ measurements are time-stamped using the probe’s GPS receiver. This enables the user to employ their own software using Time Difference of Arrival (TDOA) capabilities to find interferers, given each monitor IQ measurement is precisely time stamped.

Key Features

- 9 kHz to 6 GHz
- Sweep speed up to 24 GHz/s
- Integrated web server (Google Chrome and Mozilla Firefox supported)
- Remote firmware update capable
- Watchdog time to insure long-term stability
- Linux operating system
- 20 MHz FFT bandwidth
- Low power consumption < 11 Watts
- Dynamic range > 106 dB normalized to 1 Hz RBW
- Gigabit Ethernet
- IQ block mode and streaming with time stamping
- 4 GB internal memory available for storing files
- Integrated GPS receiver



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For Remote RF Signal Monitoring

Key Specifications

Specification	
Frequency Range	9 kHz to 6 GHz (tunable to 0 Hz)
Tuning Resolution	1 Hz
Maximum Sweep Speed	24 GHz/s
Resolution Bandwidth (RBW)	10 Hz to 3 MHz in 1-3 sequence (-3 dB bandwidth)
Video Bandwidth (VBW)	10 Hz to 3 MHz in 1-3 sequence (-3 dB bandwidth) (auto or manually selectable)
SSB Phase Noise @ 1 GHz	-98 dBc/Hz @ 10 kHz offset
Dynamic Range	> 106 dB at 2.4 GHz, 2/3 (TOI-DANL) in 1 Hz RBW
Measurement Range	DANL to maximum continuous input
Reference Level Range	-150 dBm to +30 dBm
Attenuator Range	0 dB to 50 dB in 5 dB steps
Amplitude Units	Log Scale Modes: dBm, dBμV
Amplitude Accuracy	±2.5 dB
Operating Temperature Range	-40 °C to 50 °C
Size	480 mm x 90 mm x 300 mm (18.9 in x 3.5 in x 11.8 in)
Weight	12-port: 3.9 kg (8.9 lb); 24-port: 4.5 kg (9.9 lb)

Standard Accessories

Part Number	Description
2000-1371-R	Ethernet Cable, 2.13 m (7 ft)
2000-1528-R	GPS Antenna, SMA(m) with 4.6 m (15 ft) cable, 3 dBi gain, requires 5 VDC

Optional Accessories

Part Number	Description
760-285-R	Large Transit Case with Wheels and Handle



Hardware Options

Part Number	Description
MS27103A-0706	9 kHz to 6 GHz Frequency Range
MS27103A-0424	Expands Input Ports to 24 SMA(f)
MS27103A-0110	110/220 VAC Power Supply
MS27103A-0412	Two Ethernet Ports

Vision Software Options

Part Number	Description
MS27103A-0400	Vision Monitor Enabled
MS27103A-0401	Vision Locate Enabled (requires Option 400)
MS27103A-0407	High-Speed Port Scanner Enabled
MS27103A-0479	AM Demodulation/FM Deviation
MS27103A-0482	Vision Drone Detection & Tracking
MS27103A-0485	Spectrum Occupancy (requires Option 400)
MS27103A-0486	Vision Coverage Mapping (requires Option 407)

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