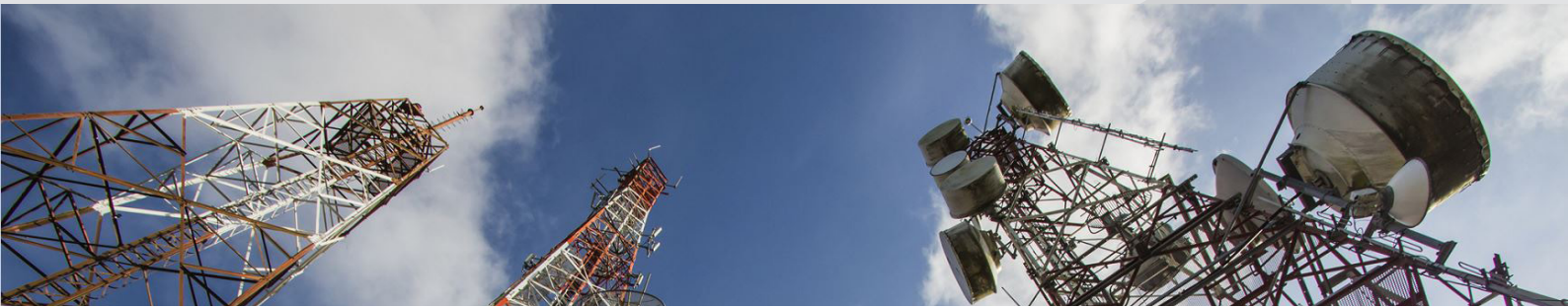**Anritsu** envision : ensure

Anritsu Remote Spectrum Monitor MS27103A

The perfect tool for cellular spectrum assurance

Spectrum Assurance

Interference mitigation of cellular networks is a top priority for optimizing networks and maximizing revenue for cellular network operators. The Remote Spectrum Monitor MS27103A provides spectrum assurance with all applications being accessed and controlled remotely. Interference and unusual signal activity can be monitored and recorded, threshold alarms can be set, and signals of interest geo-located. With the Anritsu spectrum monitoring system, your spectrum investment is protected.

Signal Detection and Mitigation

The Remote Spectrum Monitor MS27103A allows users to monitor spectrum for interference signals which can cause slow data rates and dropped calls. Using algorithms such as power of arrival (POA) and time distance of arrival (TDOA), interference signals can be accurately positioned.

The Remote Spectrum Monitor MS27103A is housed in a rack-mountable enclosure with 12 (or optionally) 24 RF Inputs. An electronic switch is used to address each port. The Remote Spectrum Monitor MS27103A is a full featured platform for monitoring and recording signals at user specified frequencies.

Features

- Sweep rates up to 24 GHz/s

- Low spurious signals for accurate signal discovery

- 20 MHz IF bandwidth

- Low power consumption < 11 watts

- Integrated GPS receiver for monitoring location and time synchronization applications

- Gigabit Ethernet available for high speed communications

- Measurements: occupied bandwidth and channel power

- Interference analysis: spectrogram and signal strength

- Dynamic range: > 106 dB normalized to 1 Hz BW

- Phase noise: –99 dBc/Hz @ 10 kHz offset at 1 GHz

- Frequency accuracy: < ±1.5 ppm, < ±50 ppb with GPS High Accuracy Mode

- IQ block mode and streaming with time stamping for TDOA applications

- Remote control via SCPI commands

- Vision™ software optional for automated spectrum measurements, setting alarms, and geo-locating signal sources

- Standard 3-year warranty

MS27103A
Remote Spectrum Monitor
9 kHz to 6 GHz

Continuous. Fast. Reliable.

The Remote Spectrum Monitor MS27103A remote spectrum monitor is designed to identify and locate interfering signals. This serves to keep cellular communication channels clear, a key goal for cellular network operators. This translates into customer loyalty, reduced customer churn and superior brand. Capable of sweep rates up to 24 GHz/s, the Remote Spectrum Monitor MS27103A allows for the capture of many types of signals. This includes periodic or transient transmissions as well as short "bursty" signals. The 20 MHz instantaneous FFT bandwidth available on the Remote Spectrum Monitor MS27103A provides the ability for wideband real-time captures of signal activity for subsequent post-processing. IQ captures can be recorded both in block mode or streamed.

Communicating with Remote Spectrum Monitors

Integrated Web Server

Using an internet browser (Chrome and FireFox are supported), a user from anywhere in the world can log in to the spectrum monitor and control any of its features. This includes such parameters as frequency setting, resolution bandwidth/video bandwidth (RBW/VBW) control, reference level configuration, and many other settings relevant to the user's spectrum monitoring application. At the same time, trace data, spectrograms, and other measurements can be viewed inside the browser window.

SCPI Programming

Users can also write their own monitoring program using available SCPI commands. Anritsu provides a user manual listing each SCPI command, a description of the commands and the correct syntax required for each command. Additionally, each individual pair of IQ data outputs by the monitors are time-stamped using high precision GPS signals. This enables the use of IQ data for TDOA applications for geo-locating signal positions.

Vision Application Software

Vision works with the monitoring hardware to automate the process of collecting measurement data, providing useful information about network heath and use of the spectrum. Two components of Vision, Vision Monitor and Vision Locate, are responsible for monitoring and locating interference signals. Vision Monitor automatically records spectrum data, maintains a searchable spectrum history database, enables alarm functions for unusual signal activity, automatically sends email alerts, and provides a set of tools for managing the spectrum monitoring system. Vision Locate provides the capability to geo-locate interference or illegal/unlicensed signals.

Key Benefits of Remote Spectrum Monitoring

• Automation and scalability

• Using Vision software or your own applications, users can identify patterns of interference, record a spectrum history and locate the sources of problem signals

• New features and options can be added remotely, no site visits required

Key Applications

• Network interference monitoring

• Geo-location of interference signals

• Maintain spectrum history and generate reports

• Set power threshold levels to automatically generate alarms