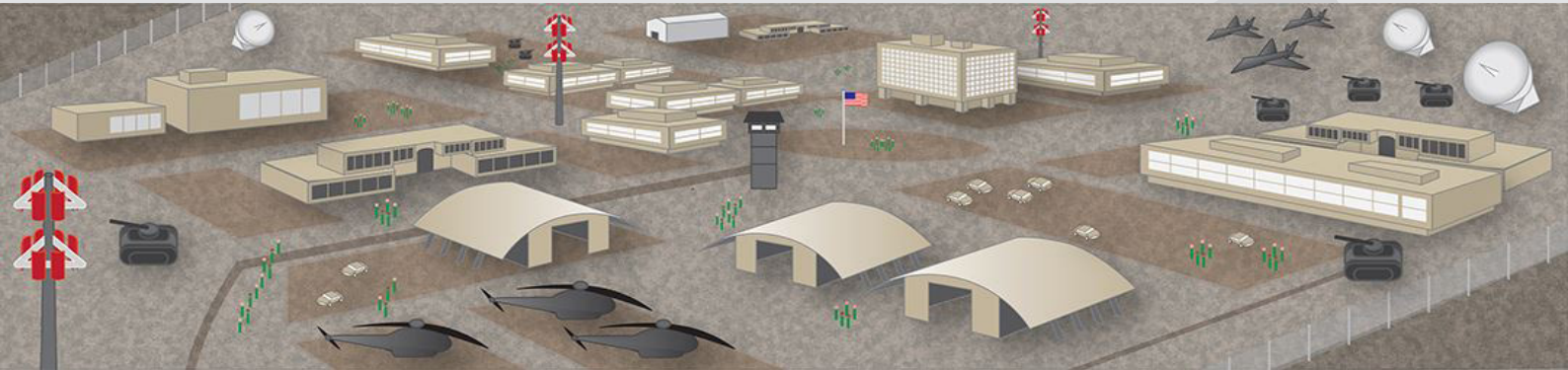**Anritsu** envision : ensure

Anritsu Remote Spectrum Monitor MS27102A

The perfect tool for military and security spectrum monitoring

Spectrum Monitoring

Reliable communications are critical for both military operations and for testing high-tech systems which rely on wireless command and control. Security at military facilities, national boarders, utilities, airports, and other sensitive sites must all have access to communications free of impediments and distortion. Spectrum monitoring is crucial to insure that such facilities remain free of interference.

Remote Applications

The Remote Spectrum Monitor MS27102A monitors are typically deployed around military bases to mitigate interference with various electronic testing conducted on base. For naval operations, spectrum monitors are positioned along the coastline where Navy training exercises share spectrum with commercial activities. When the Remote Spectrum Monitor MS27102A detects Navy testing, commercial broadcasts can be closed. A third application involves placing monitors on borders and other sensitive areas to detect and locate unusual signal activity.

The Remote Spectrum Monitor MS27102A is rated to IP67 standards for outdoor deployment. It is dust tight (noingress of dust) as well as water resistant. The unit comes with a mounting plate designed for field applications. With user supplied U-bolts or clamps, the mounting plate allows the monitor to be mounted on poles of varying diameters.

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 time difference of arrival (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

MS27102A
Remote Spectrum Monitor
9 kHz to 6 GHz

Continuous. Fast. Reliable.

The Remote Spectrum Monitor MS27102A is designed to identify and locate interfering signals which is crucial for military and security operations to keep communications free from illegal or unlicensed signal activity. Capable of sweep rates up to 24 GHz/s, the Remote Spectrum Monitor MS27102A 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 MS27102A 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 output by the monitors is time-stamped using high precision GPS signals. This enables the use of IQ data for Time Difference of Arrival (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 history of spectrum activity
- Set power threshold levels to automatically generate alarms