





Embedded Computing, Timing and Telemetry Products



MS-8118/G3 Multichannel Radio Monitoring System

Features

- Automatic computer-controlled radio surveillance
- Fully integrated and compact solution
- Software-Defined Radio architecture
- Independent monitoring of up to eight channels
- Wide frequency range from VLF to SHF
- Compression and storage of demodulated signals
- Automated scheduling of surveillance tasks
- Master/Slave signal search operations
- Optional remote control via LAN/WAN
- Ruggedized enclosure for mobile operations

The task of multichannel radio frequency surveillance and monitoring would typically involve a number of separate radio receivers, audio recorders and other discrete components interconnected into bulky and expensive systems.

The WiNRADiO MS-8118/G3 Multichannel Monitoring System provides an elegant, fully integrated solution, specifically designed for computer-controlled automatic monitoring of frequencies ranging from VLF frequencies up to low microwave, in all major modulation modes. The system is designed to monitor radio frequencies on multiple channels simultaneously, record digitized signals on the hard disk for easy later retrieval, and perform automatic decisions based on the received signals.

This system is based on a ruggedized heavy-duty 19" rackmounted industrial computer. The front panel features a high-contrast wide-angle display. There is provision for connection of an external keyboard and mouse. The system is capable of simultaneous independent monitoring of up to eight channels from VLF to SHF frequencies

The built-in hard disk allows a typical storage of several months of continuous recording, and a re-writable CD-ROM or DVD drive makes archiving of recordings easy. The unit is capable of unattended operation and, if the Client/Server Option is fitted, it can be operated remotely via a standard TCP/IP connection such as LAN or the Internet. The

recorded audio can also be remotely searched and streamed to the operator.

Receivers

WiNRADiO software-defined receivers are at the heart of the the MS-8118/G3 Multichannel Radio Monitoring Systems, making it possible to achieve the necessary high level of integration and performance.

Frequencies from 9 kHz up to 8.6 GHz can be monitored and logged. The receivers offers an unparalleled flexibility given their software-defined architecture, excellent dynamic range, and high sensitivity. Many useful features complement the receivers, making them capable of filling not only the role of a search and monitoring receiver but also that of a measuring receiver, such as the calibrated S-meter showing the received signal levels in dBm, μV or S-units, down to the -140 dBm noise floor, several spectrum analyzers, and many other features.

The MS-8118/G3 Multichannel Radio Monitoring System can be custom-fitted with a combination of receivers for different frequency ranges and capabilities, to optimize the system for a specific application and to maintain a minimum cost.



User interface

The MS-8118/G3 Multichannel Radio Monitoring System makes it possible for the user to control each individual receiver separately and observe its operational status, as well as set the system parameters for multichannel monitoring and surveillance operations.

Each receiver can operate totally indepedently, as a highperformance scanner with additional advanced facilities for automated task scheduling, spectrum analysis, signal strength logging, channel occupancy analysis, programmable audio recording, and many other features. Alternatively, the receivers can work in "master/slave" roles, where a "master" search receiver hands off its found frequency to a "slave" for monitoring, while continuing search.

The informative graphical user interface of the MS-8118/G3 system makes it possible for the user to observe the status of the individual receiver channels at a glance, and set-up monitoring tasks for a wide range of applications ranging from conventional logging and time-schedule recording, to sophisticated, fully automated, remotely-controlled radio surveillance operations.

Technical Specifications

The following specifications refer to the standard MS-8108 model. These basic specifications are to be taken as a guide only as the exact types of the receivers and the computer configuration can all be customized to suit customer specific requirements.

Computer	19" rack/panel mount, heavy duty
Receivers	WiNRADiO G3-Series software-defined Frequency range 9 kHz to 8.6 GHz (customer- specified)
Power	Selectable 100/120 or 220/240 VAC, 50 or 60 Hz, 110 W max
Dimensions	19" rack-mount

	Height: 4U (6.9" = 177mm) Depth: 16.5" (415 mm)
Weight	42.9 lb (19.5 kg)

Specifications are subject to change without notice due to continuous product development and improvement.

