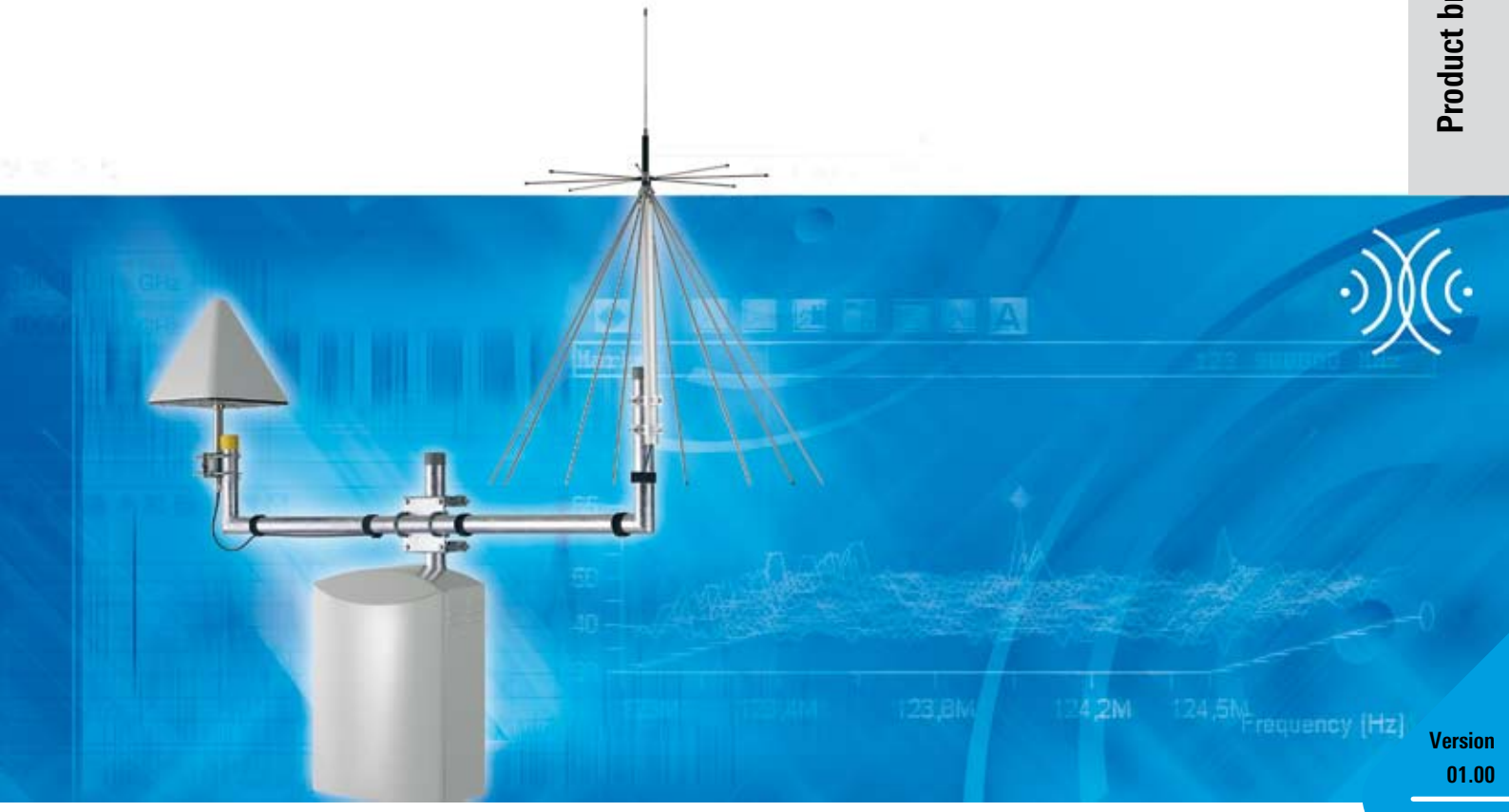
Product brochure



Version 01.00
May 2006

Monitoring System R&S®UMS 100

100 kHz to 6 GHz

- The ideal solution for efficient and cost-effective monitoring of the electromagnetic environment
- Compact design, easy to mount and put into operation (plug & play)
- Suitable for indoor and outdoor use as well as vehicle integration
- Designed for fully automatic and standalone operation (built-in processor and memory)
- Frequency range 20 MHz to 1300 MHz (with options, 100 kHz to 6 GHz)
- Universal power supply (AC and DC)
- Low power consumption
- Remote control via LAN and mobile phone networks
- Easy integration into R&S®ARGUS Radio Monitoring Networks

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Description

The system consists of an RF frontend, control computer with special firmware, antenna, Ethernet and mobile phone network interfaces, and circuits for power supply, cooling or heating. Everything is integrated in a closed container, placed inside a second container.

Due to this box-in-a-box concept, the entire system is well protected against even harsh environmental conditions and extremely low or high temperatures.

The system can be mounted on the roof of a building, on different kinds of masts (lamp standards, flagpoles, etc), on mountain tops, or hidden inside an advertising column.

Owing to a modular antenna concept, the entire frequency range is covered with only two antennas.

All connectors for receiving antennas, power supplies (AC/DC), Ethernet, mobile phone antenna and earthing are located at the bottom inside the outer box, well protected against environmental influences.

The system has no local control elements and is therefore fully remote-controlled by the R&S®ARGUS-UMS control software. This software is based on the tried-and-tested Spectrum Monitoring Software R&S®ARGUS, providing highly efficient functions. It can control even large networks of the R&S®UMS 100 as well as single units.

Nevertheless, the standard R&S®ARGUS software can also control the R&S®UMS 100 and other devices if the appropriate software options are installed.

Networking can be set up via a LAN cable or wirelessly via a mobile phone network connection (e.g. GSM). Both choices are always available.

The system is designed for complete autonomous and continuous operation, 24 hours a day/365 days a year.

Power supply

The universal concept allows 10 V to 30 V DC as well as 100 V to 240 V AC to be supplied in parallel. Thus, if AC power is lost, operation is continued without interruption using the DC power, e.g. from a vehicle battery.

Special emphasis has been placed on ensuring minimum power consumption. For typical ambient temperatures between 0 C° to +55 C°, the power consumption is only approximately 25 W.

Operation

In the network control center, where access to the PSTN, WAN or mobile phone network is available, the R&S®UMS 100 is controlled from an external computer running R&S®ARGUS-UMS.

Using the intuitive graphical user interface, even complex measurement tasks can be performed very efficiently and easily. The measurement results can be displayed as tables as well as graphics. All data can be saved internally and can be retrieved from the PC in the control center for later evaluation and analysis. During manual "live" measurements, audio transfer, listening to AM/FM demodulated signals and recording are also possible in parallel, even with "low-speed" links such as GSM.

Dedicated workflows for various measurement tasks are available. One example is the capability to compare the actual measurement results with reference data in realtime while the measurement is running. Thus, deviations from nominal values, overshoots or undershoots of user-defined thresholds, or unknown transmitters are detected quickly and reliably. Also, an alarm message is immediately sent to the control center.

Therefore the R&S®ARGUS-UMS control software comes with innovative alarm handling, providing either automatic message-receiving from the R&S®UMS 100 or – if preferred – a configurable polling function that cyclically checks the R&S®UMS 100 for alarms.

R&S®ARGUS-UMS control software window showing automatic measurement results and alarm log

Typical applications

- Monitoring of large areas (e.g. national borders, coastlines, harbors, military training areas)
- Searching for new (illegal) signals that may cause harm to critical communications (e.g. near airports)
- Monitoring whether known transmitters are operating in compliance with their license terms
- Monitoring of rooms and buildings to detect the use of illegal transmitters (e.g. airports, hospitals, schools)
- Mobile searching for new signals and monitoring of existing signals via integration of the R&S®UMS 100 into conventional vehicles

Scope of delivery

Provided as a turnkey system, the R&S®UMS 100 standard system comes complete with a box including all assemblies for mast, wall or ceiling mounting, mast with tripod, antenna and cables for power and antenna connection. For easy assembly, a toolset with all necessary wrenches and screwdrivers is included.

Ordering information

Designation	Type	Order No.
Monitoring System	R&S®UMS 100	3030.3013.02
Options		
Frequency Range Extension 0.1 MHz to 20 MHz	R&S®UMS 100HF	3030.3020.02
Frequency Range Extension 1.3 MHz to 6 GHz	R&S®UMS 100SHF	3030.3036.02
Control Software	R&S®ARGUS-UMS	3034.0090.02

Special adaptations and configurations are available on request.

More information at
www.rohde-schwarz.com
(search term: UMS100)

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