



The RAMS is an autonomous radiation monitoring station designed for monitoring ambient air in a place of its deployment. Several stations can create a monitoring network to provide a real measurement of radioactivities in vicinities of nuclear facilities of larger areas, regions or country. Data monitoring stations is sent wirelessly to a control computer for processing and visualization. Each monitoring station can be equipped with a solar panel for autonomous operation in the field without necessity to provide external power supply.

Benefits

- Bespoke solution for various outdoor monitoring tasks
- Proven ruggedized construction and technology
- Optional connection of various measuring probes
- Power supply from various independent sources (solar panel, battery, mains, diesel generator)
- Advanced data transmitting to server computer
- Powerful software for data processing and visualization

Key Figures

$10_{\text{nSV/h}}$ to $10_{\text{Sv/h}}$

➡ High measuring range according to the used probe

IP 68

➡ Degree of protection

12 hours

➡ Minimum battery runtime.

Product Description

The RAMS system is intended for measurement of ambient dose equivalent dose rate using a NuDET EGM probe with GM tube sensor. The system can be additionally equipped with other detectors like NuDET ENA and NuDET ENA-UW (underwater) 2» or 3» (NaI(Tl) probes for receiving spectrometric data or with a meteorological sensor for measuring ambient temperature, humidity and pressure. The station works fully autonomously powered from a solar panel in combination with a battery accumulator. Optionally various power sources can be used for running the station. Measured data from each station is transferred via internet to the central server for further processing. Data transfer is secured by WiFi, GSM/3G/4G mobile networks or satellite internet connection.

NuSOFT RADIS Control Software

- Selection between local or server application
- Local application requires installation on a PC
- Server application operates as a web server, stations can be controlled from any computer with web browser including smart devices like smartphones or tablets. Application can run on Windows, Unix or Linux. Data is stored in Oracle, Firebird or Microsoft SQL database.
- Creation and maintenance of radiation monitoring network.
- GIS (Geographic Information System) integration.
- Monitoring stations setup.
- Condition diagnostics of monitoring stations battery level, charging current, state of electronics, detectors and others.
- Setup of alarms and notifications.
- Selection of alarm and notification way of transfer (SMS, e mail etc.).
- Visualization, archiving and export of measured data.

Product Applications

- National Early Warning Network
- Radiation monitoring network of larger territories
- Local radiation monitoring network around various nuclear facilities like nuclear waste processing & repositories, PET centres, hospitals, power plants and calibration laboratories
- Use of individual NuEM RAMS monitoring stations for monitoring smaller areas.

Product Specifications

Power supply	Solar panel charger, 9-30DC battery accumulator, 110 230V AC 50 60Hz or combination.
Battery runtime	Min 12 hours
Communication interface	Ethernet, 2G/3G/4G mobile networks, radio broadcasting modem (free or licensed frequencies), WiFi module, satellite internet connection or their combination
Detectors	<ul style="list-style-type: none"> • NuDET EGM probes based on GM counters • NuDET ENA NaI(Tl) spectroscopic probe • NuDET ENA UW/underwater probe • Meteorological sensor • Others bespoke solution
Control unit	PC with control & diagnostic SW in built in a box with electronics securing power supply management, connection of detectors and other functions
Optional accessories	GPS module
Protection	Industrial protection IP68 Lightning protection
Operating humidity	Up to 100 %
Operating wind speed	Up to 40 m/s
Operating temperature	From -50 °C to +50 °C
Local data storage	Up to 6 months of operation
Sampling time	1 - 180 minutes
Transmission interval	1min - 96 hours
Stand frame	Ruggedized steel construction

