

RanidSONNI

Radiological Reconnaissance Vehicle



- High performance tools for radionuclide search & identification
- Platform independent solution
- Expert grade tools made available for every user



Environics

For your SAFETY

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Radiological Reconnaissance Vehicle



RanidSONNI ensures high performance tools for radionuclide search & identification.

RanidSONNI is a sophisticated radiological measurement vehicle solution, which is designed to detect and analyze potential radiological and nuclear threats, such as a release of radioactive materials from a reactor or a dirty bomb. It is a mobile, versatile radionuclide laboratory, with high quality expert tools designed in a way that no special training is needed. Any crewmember can become a radiological expert and perform valid and accurate measurements when working in an Environics RanidSONNI vehicle.

KEY FEATURES

- A wide range of high quality equipment
- Expert tools made for easy use
- Highly mobile and modular solution
- Platform independent
- Versatile communication systems
- Environics EnviScreen compatible

APPLICATIONS

- R/N monitoring of mass events and high security meetings
- Locating orphaned or stolen sources
- R/N monitoring of industrial areas and nuclear power plants
- Harbor and railway safety
- Customs and border control
- Police forces and National guards
- Environmental monitoring

Why RanidSONNI?

In the time of radiological threat, like nuclear accident or a dirty bomb, the keys to minimizing the effects are accurate detection and fast response. These are achieved by performing a sufficient amount of measurements with the correct instruments to ensure early warning.

A good mobile measuring system is able to perform measurements while moving. A better system can analyze the results in real time. The analysis must be fully automated, reliable and able to transfer the key findings to a remote operations center. The crew must have good interactive tools for the fast review of any suspect finding produced by the detectors. These requirements were the design basis of RanidSONNI Radiological Reconnaissance Vehicle.

Functional Layout

The vehicle has been designed to allow easy access between the cockpit and the operations area. This enables more dynamic workflow even with a small crew. The storage area is designed for the portable instruments, contaminated equipment and ground samples, or samples with high activity.

Easy Expert Tools

Every part of the RanidSONNI solution is designed with a regular crewmember in mind. All the sophisticated tools are integrated to the system in such a way that they can be operated with little or no experience at all, and everyone can provide high quality analytical data for the experts in the control centers.

Expandable Performance

For even more robust detection and analysis the RanidSONNI can be further equipped with additional detectors, and portable battery powered standalone air samplers, which can be dropped at any location for fully autonomous sampling.

Versatile Communications

The RanidSONNI solution comes with most common wired and wireless communication and data transfer options pre-installed. These enable constant contact and fast exchange of information with the control centers at any time.



Technical Data

Structures

- Easy clean surfaces
- Storage for dirty equipment in separate compartment
- Mounting points for NaI detectors on the side walls and forward collimated LaBr3 scintillation detector
- Mounting point for sample gamma spectrometry measurement station on the floor (dual usage of portable HPGe)
- Shock absorption for detector and server mounting points
- Mounting points for air two air sampling systems (feedthrough)
- 230 VAC / 50 Hz electrical power supply
- 12 VDC power supply from the vehicle engine alternator
- 2 x 230 VAC and 2 x 12 VDC outlets per workstation
- UPS
- Back up generator for 230 VAC power supply
- Automatic 230 VAC power input logic (internal, external, back up source selection)
- Servers 1 + 1 (optional)
- Laptop computers for the workstations
- Internal network for the servers and the workstations
- External network connection with GPRS or 3G
- Voice communications to crew members and back to the command center

Electrical

ICT

Air sample collection system

- Two collection lines for air sample collection
- Adjustable air flow from 10 - 40 m3 per hour
- Filter holder cassettes to facilitate easy sample handling
- Support for glass fiber and membrane filters
- Collection areas compatible with 76 mm diameter gamma spectrometer end cap and 45 mm PIPS alpha spectrometer in standard alpha spectrometer vacuum chamber

In-situ Measurement Systems

- Two large side facing 180° FOV scintillation detector (NaI) One collimated forward facing scintillation detector (LaBr3)
- Neutron detectors (3He or Lithium Iodine tubes) OPTIONAL

Sample measurement systems

- HPGe detector for sample gamma spectrometry; dual-use portable device to be used also in search missions outside the vehicle
- Background shield for sample gamma spectrometry

Additional equipment and electronics

- GPS
- Weather station with temperature, rain and wind information
- Dose rate meter
- Portable air sample collection equipment
- Forward looking surveillance camera with digital image storage



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