MONA ENVINET

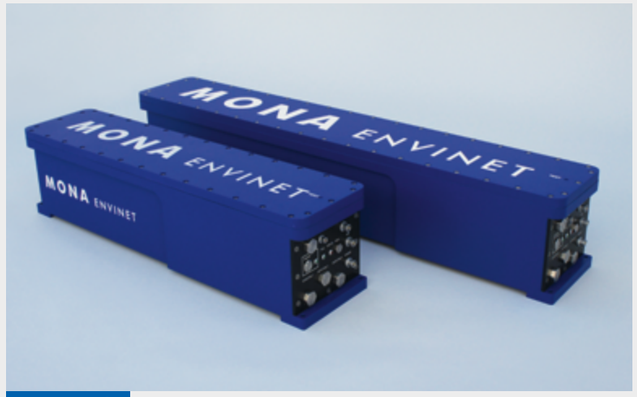
MONA – Mobile Spectroscopic Radiation Detection System

MONA is ENVINET's mobile spectroscopic detection and survey system for vehicle or airborne use. It is able to detect the smallest amounts of artificial radiation in the environment. The system acquires the gamma spectra and identifies the isotopes, calculates the total gamma dose rate as well as the dose rate for each identified nuclide. It compares the measured and calculated results with predefined alarm levels and uses GPS data to assign the actual monitoring location to the related data records and spectra.

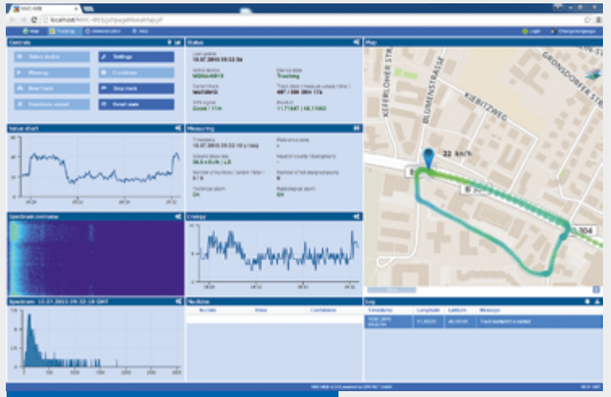
ENVINET

MONA IS ENVINET'S SPECTROSCOPIC MOBILE SOLUTION

It combines state-of-the-art detector technologies with a modern software environment. In combination with the robust design, the intuitive user interface enables operation under any environmental conditions. It is easy to use and the integrated sophisticated analysis provides all information needed for decision-making.



Detector unit


Typical configuration of the user interface

Vehicle roof mounting

APPLICATIONS

MONA is a highly sensitive gamma spectroscopic system designed for mobile applications as

- Survey and detection of gamma contamination in the environment
- Uncovering and localization of hidden radioactive material
- Vehicle and airborne acquisition of surface contamination profiles (area screening)
- Support during nuclear emergencies for civil defense, fire brigades and radiation protection
- Routine measurements around nuclear installations
- Oil and gas industry

FEATURES

- Real-time detection and directional localization of very low artificial contamination
- Fast acquisition (up to 0.1 s, depending on configuration) provides high spatial resolution
- Automatic energy calibration
- Supervision of detectors and electronic devices
- WiFi for wireless communication between detector and control unit
- Integrated battery supply for autonomous operation
- Integrated GPS receiver
- Selectable alarm levels
- Map server with preinstalled OpenStreet maps
- Comprehensive track management and visualization
- Web interface for easy data access and configuration
- 3G / LTE adapter for data export to monitoring center NMC
- Extendable with additional detectors (optional)
- Integrated accuracy test

DESCRIPTION

The MONA system is a combination of a high sensitive detector unit and a ruggedized laptop as control unit.

FUNCTIONS

- Acquisition and storage of gamma spectra every cycle
- In-situ isotope identification
- Measurement of total ambient equivalent gamma dose rate H*(10)
- Provision of nuclide-specific ambient equivalent gamma dose rate H*(10)
- Online visualization on maps (tracking)
- Visualization of data on tables, charts and waterfall diagram with 2D sectional views
- Storage and retrieval of survey data ("tracks")
- Data exports in different formats (ANSI N42.42, CSV)
- Two operation modes: "tracking" (mobile use) and "recording" (stationary use at fixed locations)
- Visible and audible alarms
- Remote control and visualization via remote desktop

OPTIONS

The MONA system is extendable with additional detector units (scintillator size from 4 up to 16 liters) to increase the sensitivity or for directionality (i.e. to indicate the direction of the source relative to the instrument). In addition to the optional internal neutron detector the system offers an interface to an external neutron detector. Many accessories are available such as the shock-absorbing vehicle roof-top box, a transportation box, a satellite communication system, etc.

USER INTERFACE

Modern web-based user interface NMC. MONA uses the NMC as data management system with its integrated web interface for easy configuration, operations and data management of the MONA. A database guarantees effective data management.

BENEFITS

- Easy to use
- No wiring needed between mobile PC and detector
- Highly automated operation
- Minimal service expenses
- Autonomous operation
- Maintenance-free operation
- Flexible detector configuration for different applications

MODERN GIS APPLICATION

The user interfaces uses modern GIS applications for visualization of the measurement track. On one view all information is prepared as time series, waterfall diagram and map overlays. Live data as well as historical data can be easily viewed and inspected by the user.


Online tracking

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