



HERMES

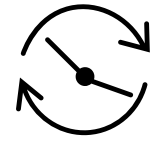
RUGGED MOBILE RADIATION SURVEY UNITS



Wide range of detectors and configurations



Rugged portable case for outdoor applications



Real-time source detection and classification

Supported detectors: NaI(Tl), CsI(Tl), GM tubes, plastic scintillators, neutron counters

Rugged, high-protection case with foam interior

Customisable dimensions, connections and equipment

Integrated GPS, LAN, WiFi, mobile connectivity

Built-in panel PC and/or remote control through tablet or smartphone

HERMES systems are rugged, portable units for radiation detection, designed and tailored for a wide range of operational scenarios such as gamma and neutron detection, dose rate measurement, gamma spectroscopy and more. **HERMES** systems are suited for emergency response activities, as they are mounted inside robust and high-IP technical cases, which can be handheld or vehicle-mounted.

The **HERMES** product line includes customisable configurations, such as:

- **HERMES NAI** or **CSI**, with NaI(Tl) or CsI(Tl) detector and MCA to perform gamma spectrometry
- **HERMES GMT** or **PLA**, with Geiger-Muller or plastic detector for high-sensitivity gamma monitoring
- **HERMES NEU**, with $^{10}\text{BZnS}$ neutron detector and plastic moderator for artificial neutron source detection
- **HERMES SENTINEL**, combining NaI(Tl), GM tubes and neutron detector for comprehensive radiation surveillance

HERMES units support remote operation via LAN or Wi-Fi through a smartphone or a tablet. According to the configuration, the proprietary software provides real-time dose rate data, nuclide identification, alarms, and interactive heat mapping. Scan results, GPS coordinates and events are automatically logged into the local memory for off-line processing.

HERMES units incorporate advanced gain stabilization, dead time correction, and automatic energy calibration based exclusively on natural background radiation (no source needed to calibrate).

CONFIGURATION EXAMPLE: HERMES NAI

HERMES NAI is the most representative example of NaI(Tl)-based gamma spectrometer and survey meter, which includes:

- NaI(Tl) 3"x3" cylindrical scintillator coupled with a SiPM
- Compact built-in analogue and digital electronics, and 1024-channels MCA
- Touch-screen panel PC with proprietary control and analysis software
- LiFePo4 batteries (typical ≥ 8 h operation)

All mentioned components are housed in a compact, rugged technical case designed for outdoor use (typical rating with lid closed: IP67, dust and water resistant), offering easy and comfortable handling for the user.

The system can be also controlled remotely through an App installed on a smartphone.

TECHNICAL SPECIFICATIONS (HERMES NAI)

- Dimensions (WxLxH): 410 × 340 × 205 mm
- Weight: < 15 kg (case included)
- Protection grade: IP67 (closed lid)
- Operating temperature: $-20^{\circ}\text{C} \div 50^{\circ}\text{C}$
- Power: LiFePo4 batteries
- Communication: LAN, WiFi, Mobile, Bluetooth
- MCA: up to 2048 channels
- Energy range: 30 keV \div 3 MeV
- Resolution at 662 keV (Cs-137): <7.5% (typical)
- Gamma dose rate range: 0.03 $\mu\text{Sv/h} \div 20 \mu\text{Sv/h}$
- Automatic gain stabilization and energy calibration



HERMES NAI on the field

OPTIONS

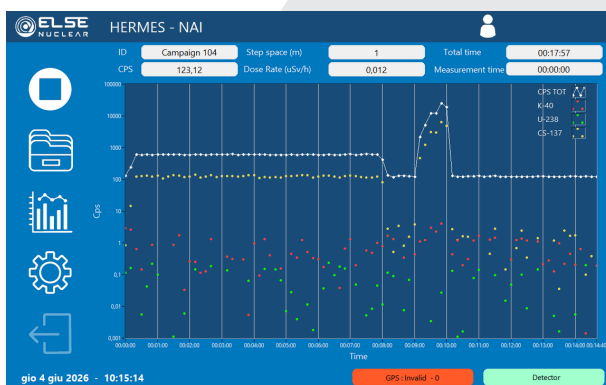
- NAI, CSI, GMT, PLA, NEU and SENTINEL (multi-detector) versions

ACCESSORIES AVAILABLE UPON REQUEST

- Vehicle mounting kit with included cigarette lighter power adapter
- Outdoor long-term operation mounting kit
- Tablet PC (in addition to panel PC/App)
- Backpack configuration
- Photovoltaic panel power supply system
- Warranty extension from 12 months to 24 months



HERMES control tablet example with web interface



HERMES user interface example

