

SPIR-Pack

Human Portable Radiation Detection and Identification System

SPIR-Pack is a backpack based radiation detection system which provides an intermediate sensitivity between the handheld SPIR-ID (RIID) and the SPIR-Ident Mobile system (vehicle / vessel / aircraft detection and identification system).

The SPIR-Pack can discreetly identify radioactive sources in a large perimeter. The SPIR-Pack can also pinpoint areas that are crowded or hard to cross with a vehicle (stadiums, train stations, airports, buildings, etc.). It is well-suited to source search operations.

A specifically designed algorithm ensures state-of-the-art detection and identification starting from very poor spectra as acquired when passing by. It provides SNM identification capabilities including heavy shielding and masking conditions.

The Smartphone application provides a convenient real-time display for measurement, identification and map. The headset or the smartphone's vibrator ensures discreet monitoring.

The SPIR-Pack is a compact and human portable system suited for special forces, large scale event security organisations and environmental agencies.



Features

- Human portable radiation detection and identification system.
- Discrete monitoring in densely populated areas or crowds during events.
- Hand-free operation.
- Instant identification of complex scenarios of masking and/or shielding.
- Direct confirmation of the detection and the nature of the threat.
- Real-time mapping.
- Long life operation.
- Connected instrument, easy data reachback.
- Remote supervision with Spir-VIEW Mobile or any other installed supervision system
- Identification of approximately 90 radionuclides.
- Up to 8 mixed radionuclides.
- Masking and highly shielded scenarios exceeding current standards.
- Confidence level indication, radionuclides and its categorisation.



MIRION
TECHNOLOGIES

Specifications

Nuclear Characteristics

Detection NaI (TI): 2" diameter x 4"
Neutron Detector: optional light detector,
optional highly sensitive detector
Gamma High Range: Geiger Muller tube

Energy Range Gamma: 20 keV to 3 MeV
Neutrons: 0,025 keV to 15 MeV

Sensitivity Gamma (¹³⁷Cs): typ. 3500 (cps) / (μSv/h)

Dose Rate Range Gamma dose rate range (by NaI): 0,01 to
50 μSv/h (1 μR/hr to 5000 μR/hr) (¹³⁷Cs)
Extended dose rate range (by GM): 50 to
99 999 μSv/h (0,5 mR/hr to 9 999 mR/hr)
Neutron: 0,0 to 999,9 cps

Identification Fast digital MCA, 1024 channels
Throughput > 100 000 cps

Continuous stabilisation and acquisition
of spectra, no field calibration needed

Functional Features

Rugged Tablet or Smartphone
with sun readable screen

Autonomy (Backpack) 40 hours

Alarms Smartphone: visual, audible and
vibration alarms with release
Bluetooth headset: audible message
Danger alarm

**GPS, Bluetooth, WiFi,
cellular communications** Data export

Mechanical Features

Dimensions SPIR-Pack G: 30,3 x 25 x 46 cm
SPIR-Pack GN: 30 x 32,5 x 51 cm or
30,3 x 25 x 46 cm (depending on
type of neutron detector)

Weight SPIR-Pack G: < 4,5 kg
SPIR-Pack GN: < 8,5 kg

Environmental Characteristics

Temperature Range Operating temperature:
-20 °C to +50 °C (-4 °F to 122 °F)

IP65 Protection Yes

**Electromagnetic
Compatibility** CE compliant (susceptibility: 10V/m),
according ANSI & IEC requirements

Identpro/SIA Identification Algorithm

Radionuclide Libraries Homeland Security
Nuclear Power Plant and
radioactive waste
Nuclear accident
Fuel cycle
CTBTO/ OSI
Laboratories and miscellaneous

Accessories

Power supply, cable, earphone

Smartphone Power supply cable

Specifications are subject to change without notice.
For the most up-to-date specifications, please visit www.mirion.com



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