

RAD IQ™ VMRDS

Vehicle-based Mobile Radiation Detection System

The **RAD IQ™ VMRDS**, is a spectroscopic mobile radiation detection system, developed for vehicle, boat and aircraft use. The unit includes up to two 2x4x16 inch NaI(Tl) detectors and tileable solid-state neutron detectors as an option. The standard configuration places the detector(s) and electronics in a water and shock resistant reinforced case. Other configurations are available according to specific requirements.

The unit can be deployed on a trunk, truck bed or boat deck in a “Load and Play” fashion as wireless communication reporting events to a display unit.

It can also be used as a temporary portal for pedestrian or vehicle screening.



Bluetooth communication to a PDA or Tablet PC



Rapid deployment “Load and Play” fashion

Key features

- Gamma-ray Spectroscopy for Specific Nuclide Identification
- Solid-state Neutron Detector (optional)
- Bluetooth Communication to PAD and/or Tablet PC
- Up to 8 hour operation on a single battery charge
- Automatic System Calibration and Stabilization
- Database protocol for log files and alarm events
- Water and Shock Resistant (IP 67)

Applications

- Emergency first responders
- Military marine interceptors
- Radiological Area Mapping
- Geological Radiation Survey
- Safeguard and nuclear security

Application SW

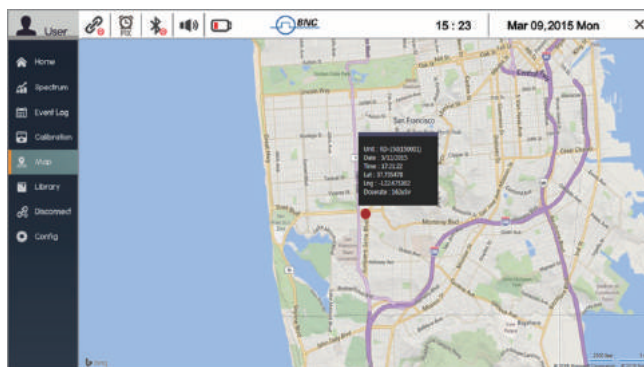
- The RAD IQ™ VMRDS application SW is compatible with any Windows platform. It graphically displays details about identified isotopes and a map derived from GPS data. Alternatively, Android-based application SW, PeakAbout, can be used for smartphone.



Main screen



Event Log screen



Map Screen



Spectrum Analysis/ID screen

Detectable Isotopes

NORM	K^{40} , Ra^{226} and daughters, Th^{232} and daughters
Medical	F^{18} , Cr^{51} , Ga^{67} , Mo^{99} , Tc^{99m} , Pd^{103} , In^{111} , I^{123} , I^{125} , I^{131} , Xe^{133} , Sm^{153} , Tl^{201}
Industrial	Na^{22} , Co^{57} , Co^{60} , Se^{75} , Rh^{106} , I^{132} , I^{133} , Ba^{133} , Cs^{134} , Cs^{137} , Eu^{152} , Ir^{192} , Am^{241}
SNM	U^{233} , U^{235} , U^{238} , Pu^{239} , Pu^{241} , Np^{237}

Specification

INPUT / OUTPUT			
USB	Micro USB 2.0		
Bluetooth	Class 2.0, max 100m range (class2)		
GPS	Built-in GPS in a Tablet PC or Smartphone		
PHYSICAL			
Dimensions (W x D x H)	74 x 52 x 30 (cm)		
Weight	20 kg (44 lb) VMRDS-2G1 model		
ENVIRONMENTAL			
Operating Temperature	5 to 122 F (-15 to 50 C)		
Relative Humidity	10 to 80%, non condensing		
Protection Rating	IP 65 (according to IEC 60529)		
PERFORMANCE			
Energy Resolution (Gamma)	NaI(Tl) 2x4x16 inch: > 8% @662 keV		
Energy Range (Gamma)	20 keV □ 3 MeV		
Throughput	> 150 kcps		
MCA channel	10bit 1024 channel		
Dose rate range (NaI)	0 □ 10 mR/h		
Dose rate range (GM)	10 mR/h □ 10 R/h		
Stabilization	Automatic real-time stabilization using K-40		
Nuclide Identification	According to ANSI N42.34, isotope/category/confidence report		
Battery	> 8 hours, Lithium Ion		
DETECTORS			
Gamma NaI(Tl)	2x4x16 inch □ Standard, 4x4x16 inch □ optional, up to 2 detectors/unit		
Gamma (High Dose Rate)	Geiger-Muller detector (Standard)		
Neutron (optional)	Solid-state Neutron detector: 4 cm ² active area, 20% thermal neutron eff. Gamma rejection: 1: 107, Tileable up to 20 detectors.		
DISPLAY		SOFTWARE	
Smartphone	Samsung Galaxy Player or equivalent	Reach-back Feature	ANSI N42.42 event data via a Tablet PC or Smartphone
Tablet PC	Any Windows compatible tablet PC	Application SW	Android based application SW for Smartphone Windows based application SW for Tablet PC