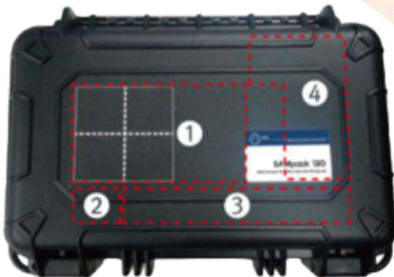# NUCARE | USA

RAD IQ™ BP200C

Backpack RIID (Radiological Isotope Identification Device)

CE FC KC

"Smaller. Smarter. Truly Hands-Free"

The primary design objective of the RAD IQ™ BP 200C was to be **lightweight** and **compact**, allowing for **fatigue-free** and **hands-free** operation for first responders and covert search applications without compromising performance.

The standard configuration includes a 3x3 inch scintillation detector and a GM tube for detecting gamma rays, with the option to add neutron detectors as needed. All components are housed in a water- and shock-resistant reinforced Pelican case.

Tailored configurations are readily available to fulfill your unique requirements.

① Gamma detector
② GM tube
③ Neutron detector
④ Battery and electronics

Data acquisition and display are facilitated through a PDA or a tablet PC, which connect wirelessly.

Applications

- Homeland Security
- Emergency Responder
- Safeguard and nuclear security
- Radiological Area Mapping
- Geological Radiation Survey

Key Features

- Hands-free operation
- Small form factor and lightweight
- Bluetooth communication to PDAs
- One-touch reach-back service
- Sourceless auto-stabilization
- Water/shock resistant pelican case

❖ Software applications designed for PDAs or Tablet PCs

Event acquisition, display, and control can be done wirelessly using either a smartphone or a tablet PC. The PDA display presents users with clear and easily readable information, allowing for the assessment of current radiological levels, personal safety, and radionuclide identification.

We provide two distinct versions of our software applications tailored to meet the needs of both PDA and tablet PC users. These applications are designed to enhance convenience and performance, featuring an intuitive menu and a hierarchical layout that facilitates easy navigation and operation.
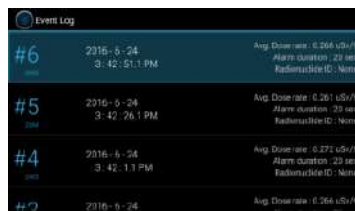
PeakAbout

PeakAbout and PeakGo provide essential features like GPS tagging, photo and video attachments, pop-up help, and one-touch reachback functionality.
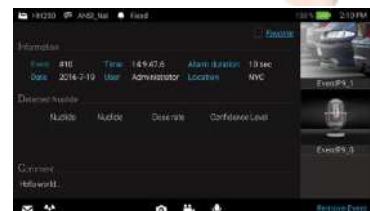
PeakAbout enhances operational efficiency with hands-free interaction and real-time communication with the command center via smartphone.

Home screen

Spectrum manipulation
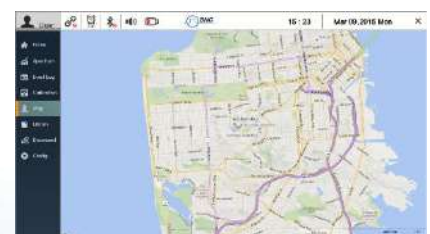
Event Log

Photo/audio capture

PeakGo

Measurement status, visual display, spectrum analysis, background measurement, configuration, and calibration are all controlled by the Tablet PC and its application software PeakGo.

Analysis screen

Home screen

Map screen

❖ Specifications

DETECTORS	
Gamma detector	NaI(Tl) : 2x2, 3x3 inch. CeBr3 or LaBr3: 1.5x1.5, 2x2 inch
Gamma (High dose)	Gain compensation Geiger-Muller detector
Neutron detector	He-3, Domino (Solid-state), or CLLBC

PERFORMANCE	
Energy Range	30 KeV - 3 MeV
Dose rate range	< 100nSv/h ~ 1mSv/h (Scintillation detector), 1mSv/h ~ 10mSv/h (GM tube)
Energy resolution	< 8% (NaI), < 5% (CeBr, LaBr, CLLBC)
Linearity	< 2% (Realtime Linearization by firmware)
MCA Channel	16bit 1024ch
Stabilization	Temperature corrected real time stabilization

BATTERY			
Type	Lithium Ion	**Operation Time**	> 8 hr.

PHYSICAL			
Dimensions(WxDxH)	280 mm x 190 mm x 100mm	**Weight**	3.5 kg (7.7 lb)

ENVIRONMENTAL			
Operating Temp	-20 °C (-4°F) ~ 50 °C (122°F)	**Protection Rating**	IP65
Relative Humidity	10 to 80%, non condensing	**Testing Condition**	EN 61326, MIL-STD-810G 501.5, MIL-STD-810G 514.6

ACCESSORIES			
Carrying Case	Pelican-type hard case	**Charger**	USB charger
Backpack	Backpack or waist backpack	**PDA**	Samsung Galaxy J5 or equivalent
		Tablet PC	Samsung Tablet or equivalent

SOFTWARE	
Reach-back	ANSI N42.42 or CSV event data via a smartphone or a tablet PC
Application SW	PeakAbout: Android based application SW for a smartphone PeakGo: Windows based application SW for a Tablet PC PeakID: Windows based application SW for a command center

DETECTABLE ISOTOPE LIST	
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}