

Model SAM 950

Ruggedized Isotope Identifier with Reach-back



FEATURES

- ANSI N42.34 compatible
- PDA based hand-held RIID (patented)
- One click reach back service
- Automatic System Calibration and Stabilization
- Database protocol for log files and alarm events
- Water and Shock Resistant
- Solid state neutron detector (optional)
- Multimedia support
- LED flash light for target identification
- Touch screen

APPLICATIONS

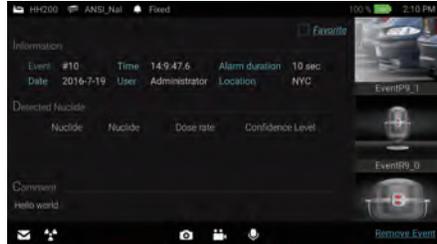
- Homeland Security
- Emergency Response
- Safeguard and Nuclear Security
- Radiological Area Mapping
- Geological Radiation Survey
- Medical
- Industrial
- Environmental Waste Management
- Hazmat
- Health Physics



Berkeley Nucleonics

Test, Measurement and Nuclear Instrumentation since 1963

The Evolution of Radiation Detection.



Photos, video and audio capability

SAM950 enables to store text/audio memos, pictures and/or video clips onto an event. Embedded water proof speaker replays recorded audio memos. CMOS 13.0 MP camera provides high resolution pictures and full HD videos.

SAM 950 is designed to meet the requirements of ANSI 42.34 criteria for hand-held instruments for the detection and identification of radionuclides.

Our patented "Smartphone based hand-held RIID" feature provides a superb solution for the demanding requirements of Homeland Security in the USA and other countries.

Touch Screen

Touch screen is powerful feature that enables user to manipulate spectrums, to surf among different menu screens and to type in commands by simple fingertip actions.



Easy to use Reach-Back SAM950

provides "one-click reach-back" solution for data transfer to Rad Responder Network or a command center. The multi-media support, GPS and communication capabilities enable the operator to rapidly deliver a complete, informative and actionable report to reach-back centers. via E-mail



Rad responder

Integration with FEMA's free network for logging, transmitting, storing, analyzing, and presenting environmental radiation monitoring data.

Command Center

Event data can be transferred to a command center via Wi-Fi network protocol. Peak ID application SW provides full analysis capability of even data

Description of device

The **SAM950** design goal was developing versatile while easy-of-use device. It equips with following distinctive parts and features.



1	Gamma Detector (NaI(Tl), CeBr ₃ or LaBr ₃)	2	Optional solid-state Neutron detector	3	High resolution camera
4	LED Flash Light	5	Touch Screen Display	6	Water Proof Speaker



The shoulder strap reduce the fatigue of user from long operation.



Tripod Mount for Radiation Detection
SAM 950 can accommodate up to 3x3 inch NaI(Tl) detector. In addition, high resolution detectors such as CeBr₃ and LaBr₃ detector option is available with size of 2x2 or 1.5x1.5 inch.

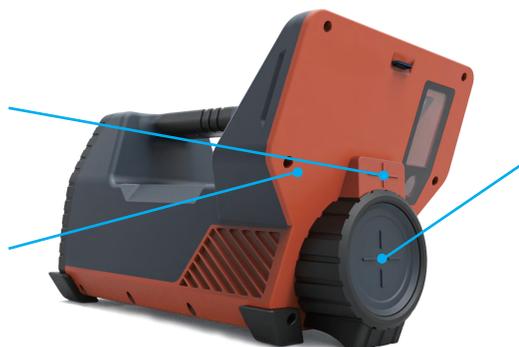
Radiation detectors

Solid-State Neutron (optional)

Compact solid-state neutron detector provides not only small form factor but also high gamma rejection ratio.

Default GM tube

In case of excessive gamma event, the energy compensated GM tube take over Gamma event measurement from the main scintillator based Gamma detector.



Main Gamma detectors

SAM950 can accommodate up to 3x3 inch NaI(Tl) detector. In addition, high resolution detectors such as CeBr₃ and LaBr₃ detector option is available with size of 2x2 or 1.5x1.5 inch.



INPUT / OUTPUT			
USB	Micro USB 2.0, IP65	AC Adapter	12V, 3A
Camera	CMOS 13.0 MP	Speaker	84dB(1W/0.5m), Water Proof
GPS	Built-in GPS in Smartphone	Display	5 inch Touch Screen
PHYSICAL			
Dimensions (W x D x H)	192 x 356 x 214 (mm)		
Weight	4.3kg (9.5 lb) w/ 3x3 inch NaI(Tl) / 3.2kg (7 lb) w/ 2x2 inch NaI(Tl) / 3kg (6.6 lb) w/ 1.5x1.5 inch LaBr ₃ , CeBr ₃		
ENVIRONMENTAL			
Operating Temperature	-15°C(5°F)~50°C(122°F)		
Relative Humidity	10 to 80%, non condensing		
PERFORMANCE			
Energy Resolution (Gamma)	NaI(Tl) 2x2, 3x3 inch :> 7%@662 Kev, LaBr ₃ 2x2 inch :> 3% @662Kev, CeBr ₃ 2x2 inch :> 4% @662Kev		
Energy Range (Gamma)	20 keV – 3 MeV		
MCA channel	10bit, 1024 channel		
Dose rate range	0 – 10 mR/h (NaI), 10 mR/h - 10R/h (GM)		
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 Detector	NaI(Tl) - 2x2, 3x3 inch / CeBr ₃ - 1.5x1.5, 2x2 inch / LaBr ₃ - 1.5x1.5, 2x2 inch		
Gamma (High Dose Rate)	Gain Compensated Geiger-Muller detector		
Neutron (optional)	Solid-state Neutron detector: 4 cm ² active area, 20% thermal neutron eff. Gamma rejection: 1: 107		
SOFTWARE			
Reach-back Feature	ANSI N42.42 or CSV event data via a Smartphone (Wi-Fi)		
Application SW	Android based application SW for Smartphone / Windows based application SW for Command Center		