



Features

- Covert Form Factor
- Low Power Consumption
- Clandestine Mode
- Shock Resistant and Water Resistant
- Automated Detector Calibration
- Smart Phone, Ring Tones, Camera, etc.
- Left/Right Mode via Two Detectors
- Non-isotope ID Version Available

Applications

- Emergency Response
- Law Enforcement
- Homeland Security
- Undercover Surveillance
- HAZMAT



SAMpack 120

Backpack Isotope Identifier

SAMpack 120 Backpack Isotope Identifier

Description

Berkeley Nucleonics offers isotope identification backpacks (backpack radiation detectors) for clandestine monitoring of gamma and neutron radiation. The SAMpack 120 can be customized to specific applications with a variety of detector and networking options. Low power drain allows for many hours of uninterrupted monitoring. New multi-detector algorithms provide directionality to the user, enabling faster localization of nuclear sources.

Additional user software may be integrated to allow fast and automatic data transmission to reachback centers. Alarming options include both local alarms (on the smart phone app) and in stand off locations. As an example, the user may use the backpack to zero in on the likely cause of the alarm, take one or more pictures of the area with a smartphone, and send those pictures back to the Command Center to supplement the data transmitted automatically by the backpack. The RD-120 SAMpack Radiation Detection system can also continuously transmit a GPS location along with corresponding radiation levels and energy spectrum.



SAMpack 120 Ordering Information

Model / P/N	Product Description
RD-120-G	Backpack Isotope Identifier (Gamma Only NaI)
RD-120-GN	Backpack Isotope Identifier with (Gamma & Neutron NaI)
RD-120-LG	Backpack Isotope Identifier (Gamma Only LaBr)
RD-120-LGN	Backpack Isotope Identifier, (Gamma & Neutron LaBr)
RD-120-CG	Backpack Isotope Identifier, (Gamma Only CeBr)
RD-120-CGN	Backpack Isotope Identifier, (Gamma & Neutron CeBr)
RD-120-2CG	Backpack Isotope Identifier, (Gamma Only Large CeBr)
RD-120-GN-SPX	Backpack Isotope Identifier, (Gamma & Neutron Large NaI)

SAMpack 120 Specifications

Standard Internal Detectors	3 x 3 NaI / 2 x 4 x 8 NaI GM-Tube	Highest Sensitivity General Purpose Isotope Identification High Gamma Count Rates
Internal Alternatives to NaI	1.5 x 1.5 LaBr	Lanthanum Bromide 2% Resolution
	1.5 x 1.5 CeBr / 2.0 x 2.0 CeBr	Cerium Bromide 3% Resolution
Optional Internal Detector	Neutron Option	Solid State Detector / Domino / ³ He
Electronics (MCA)	Digital Signal Processing 32 bit RISC, ARM Cortex 4096 Channels 150,000 CPS max	
Alarms	Automatic	Count Rate, Dose Rate, Health/Safety, Neutron Rate (optional),
	Adjustable Threshold	Fixed or Variable (up to 5 Sigma)
Data Output	Type	1024 Channel Spectra, Alarm Conditions, Count Rates, Dose Rates, Channel Energy and Count, Time, Location
	Identification	Isotope, Classification, Confidence
	Energy Range	20 keV - 3.0 MeV
	Dose Rate Range	10 nR/hr - 10 R/hr
	Reachback	XML, per ANSI N42.42
Operational Modes	User, Administrator	Independently or Networked
Functions	Designed to meet or exceed requirements of ANSI N42.34 (2006)	
	Background, Dose, and Dose Rate	
	Search, Manual Capture, Automatic Capture, Isotope ID	
Enclosure	IP65 Rated Dimensions Weight Operating Temperature Deployment	Droppable to 1 m, Water Spray Resistant, Dust proof 10" x 5" x 6" 8 lbs max (w / NaI Detector) / 19 lbs max (w / NaI Left/Right) -20° C to 50° C Handheld, 4 Steel Cleats for Shoulder Strap Detachable for Stand-off operation, Tripod Mountable
Library	ANSI, SNM, Medical, Industrial, NORM, Customizable	
	Color Coded Classification Data	
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	Expandable to include 393 Isotopes from Kocher's Radioactive Decay Data Table	
Smartphone Functions	Display Control Event Alarms Location Communication Features	5" OLED Touch Screen Secure Mounting, Tilt-able and Rotatable Adjustable Speaker Volume, Headphones, Vibration, and Visual Display 3G GPS, Reported in Spectrum File Bluetooth, Wi-Fi, micro USB, and Cellular Network Camera, Video and Voice Recording attached to Spectrum File
File Memory	4.5 GB including Event Notes, Photos, Videos	
Calibration	Automatic Self-Calibration Automatic Self-Stabilization Manual Calibration	⁴⁰ K ⁴⁰ K ¹³⁷ Cs
Battery Details	Identifier	Li-Ion, >8 hours continuous operation / AA Swappable Pack
	Smartphone	Li-Ion, >8 hours intermittent operation
	Charging	12 VDC Wall (AC) or Vehicle (DC)

*Specifications subject to change