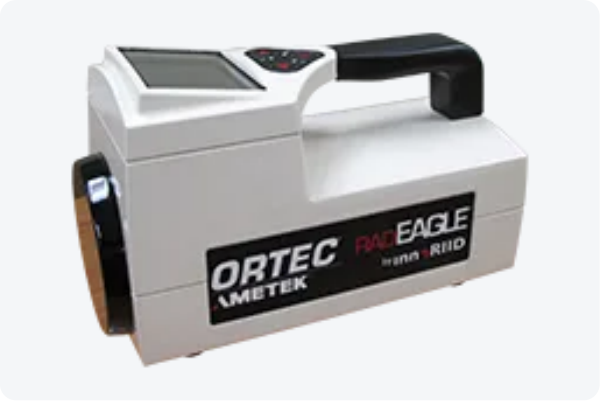
ORTEC

RADEAGLE

Handheld isotope identification

Detect and identify multiple radionuclides with a handheld instrument. For applications including border control, emergency response and recycling.



Detector type	Energy range	Spectrum channels
NaI(Tl) or $LaBr_3$(Ce), model dependent [1]	**11 keV–3 MeV** [1]	**,048** [1]

Specifications

DETECTOR

Detector type	NaI(Tl) or $LaBr_3$(Ce), model dependent	[1]
Neutron detection	^{3}He detector in models with H suffix	[1]
Nuclide categories	Special nuclear material (SNM), naturally occurring radiation (NORM), industrial emitter (IND) or medical source (MED)	[1]

PERFORMANCE

Energy resolution	At 662 keV, room temperature: NaI ≤7.2%; $LaBr_3$ ≤3.0%	[1]

MEASURING RANGE

Energy range	11 keV–3 MeV	[1]
Sensitivity (^{137}Cs gamma)	NaI models >2,500 cps/(µSv/h); $LaBr_3$ models >1,600 cps/(µSv/h), at 662 keV	[1]

ELECTRONICS & SIGNAL

Spectrum channels	2,048	[1]

COOLING

Storage	>16 GB (1,000,000 spectra)	[1]

SOFTWARE & DATA

Nuclide library	70 entries (manufacturer’s notation): Am241, Ac228, Ag110m, Ba133, Ba140, Beta+, Bi207, Cd109, Cd115, Cd115m, Ce141, Cf252, Co57, Co58, Co60, Cr51, Cs134, Cs137, Eu152, Eu154, Eu155, Ga67, Ga68, I123, I125, I131, I132, In111, Ir192, Ir192s, K40, La140, Lu176, Lu177, Mn54, Mo99, Na22, Nb95, Nd147, Neutrons, Np237, Pd103, Pr144, Pu238, Ra226, RGPu, RGPuHS, Ru103, Sb12, Sb124, Se75, Sn113, Sr85, Sr90, Tc99m, Te132, Th232, Tl201, U232, U233, U235, U238, W181, WGPu, WGPuHS, Xe131m, Xe133, Xe133m, Xe135, Zr95	[1]

CONNECTIVITY & INTERFACE

Display	3.5-inch colour TFT, 640 × 480	[1]
Communication	USB and Wi-Fi; optional GPS	[1]

POWER & BATTERY

Battery life	>8 hours with standard battery pack	[1]
Batteries	Rechargeable AA NiMH battery pack; auxiliary battery case for AA NiMH or alkaline	[1]

MECHANICAL

Detector dimensions	NaI: 76.2 × 25.4 mm; $LaBr_3$: 50.8 × 25.4 mm	[1]
Dimensions	248 × 115 × 152 mm	[1]
Weight	Approx. 2,620 g (3SG, 3SGA), approx. 2,720 g with ^3He (3SG-H, 3SGA-H), approx. 2,250 g (2LG, 2LG-H)	[1]

ENVIRONMENT & RATINGS

perating temperature	−20 to +50 °C	[1]
IP rating	IP65; Aqua models (3SGA, 3SGA-H): IP68, submersible to 15 m	[1]
Humidity	10–90%, non-condensing	[1]

ORDERING & ACCESSORIES

Dose-rate range by model	Detector: NaI models 0.01–200 µSv/h, $LaBr_3$ models 0.01–300 µSv/h; GM: up to 1 Sv/h	[1]

GENERAL

Calibration	Natural background; optional embedded calibration source	[1]
File formats	ANSI N42.42, SPE (IAEA)	[1]

Models

Model	Gamma detector	Crystal dimensions	Neutron detection	GPS
RADEAGLE-2LG	$LaBr_3$(Ce) [2]	50.8 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLE-2LG-GPS	$LaBr_3$(Ce) [2]	50.8 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLE-2LG-H	$LaBr_3$(Ce) [2]	50.8 × 25.4 mm [2]	^3He included [3]	Not included [3]
RADEAGLE-2LG-H-GPS	$LaBr_3$(Ce) [2]	50.8 × 25.4 mm [2]	^3He included [3]	Included [3]
RADEAGLE-3SG	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLE-3SG-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLE-3SG-GPS	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLE-3SG-GPS-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLE-3SG-H	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^3He included [3]	Not included [3]
RADEAGLE-3SG-H-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^3He included [3]	Not included [3]
RADEAGLE-3SG-H-GPS	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^3He included [3]	Included [3]
RADEAGLE-3SG-H-GPS-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^3He included [3]	Included [3]
RADEAGLE-3SGA	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Not included [3]

RADEAGLE-3SGA-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLE-3SGA-GPS	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLE-3SGA-GPS-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLE-3SGA-H	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^{3}He included [3]	Not included [3]
RADEAGLE-3SGA-H-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^{3}He included [3]	Not included [3]
RADEAGLE-3SGA-H-GPS	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^{3}He included [3]	Included [3]
RADEAGLE-3SGA-H-GPS-ES	NaI(Tl) [2]	76.2 × 25.4 mm [2]	^{3}He included [3]	Included [3]

Model	Embedded calibration source	Energy resolution at 662 keV	Communication	Enclosure rating
RADEAGLE-2LG	Not included [3]	≤3.0 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-2LG-GPS	Not included [3]	≤3.0 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-2LG-H	Not included [3]	≤3.0 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-2LG-H-GPS	Not included [3]	≤3.0 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-3SG	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-3SG-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-3SG-GPS	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-3SG-GPS-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-3SG-H	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-3SG-H-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP65 [1]
RADEAGLE-3SG-H-GPS	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-3SG-H-GPS-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP65 [1]
RADEAGLE-3SGA	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-GPS	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-GPS-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-H	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-H-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB and Wi-Fi (GPS only in -GPS models) [1]	IP68, Aqua configuration [2]

RADEAGLE-3SGA-H-GPS	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP68, Aqua configuration [2]
RADEAGLE-3SGA-H-GPS-ES	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	USB, Wi-Fi and GPS [1]	IP68, Aqua configuration [2]

Sources

[1] **RADEAGLE State-of-the-Art Hand-Held, Radioisotope Identification Device**
ORTEC (AMETEK) · product-page · Specifications tab, 'Model Specific Specifications'; Specifications tab, 'Specifications Common to All Models' - Radiological Performance; Ordering Information · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/portable-radioisotope-ident...

[2] **RADEAGLE Radioisotope Identification Device (brochure 26-0617)**
RTEC (AMETEK) · brochure · p. 5, table 'Model Specific Technical Specifications'; p. 4 'Common Technical Specifications' - Environmental; p. 6 'RADEAGLE AQUA' · checked 2026-10-16
https://web.archive.org/web/20230404174326/https://www.ortec-online.com/-/media/ametekortec/brochures/r/rade...

[3] **ORTEC Product Guide**
ORTEC (AMETEK) · catalog · PDF p. 41 (printed p. 38), 'RADEAGLE Radioisotope Identification Device' · checked 2026-10-16
https://web.archive.org/web/20230405035438/https://www.ortec-online.com/-/media/ametekortec/product-guide/pr...

Every value is taken from the manufacturer’s own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer’s published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.