



Gamma Neutron Imager

The CORIS360® Gamma Neutron Imager (GNI) is the only commercial technology capable of imaging both gamma-ray and thermal neutron radiation sources. By adding thermal neutron imaging, CORIS360® GNI significantly improves nuclear security and safeguard capabilities by delivering an unprecedented ability to detect, localize, and identify nuclear materials through both gamma and neutron signatures.

Utilizing an advanced mask design and patented compressed sensing technology, CORIS360® GNI delivers dual gamma-ray and thermal neutron imaging up to ten times faster than conventional methods.

CORIS360® Specifications

SYSTEM INCLUDES

	CORIS360® GNI system	Dimensions	210mm × 425mm (D × H) 8.3" × 16.8" (D × H)	Imaging Region of Interest (ROI)	Peaks and non-peaks Thermal neutron region
	CORIS360® Imaging and processing software	Weight	15 kg 33 lbs	Radiation Field of View	360° × 90° (Horizontal × Vertical)
	Tripod (optional tripod mount to image full 4π available)	Power Supply	100 VAC - 240 VAC (47 Hz - 63 Hz) Input	Optical Field of View	360° × 90° (Horizontal × Vertical)
	Ruggedised carry case	Operating Temperature	5°C - 40°C (Ambient) 41°F - 104°F (Ambient)	Angular Response	Uniform sensitivity over field of view
	Two CLLBC detectors	Storage Temperature	5°C - 40°C (Ambient) 41°F - 104°F (Ambient)	Gamma Dose Rate Range	<0.1 µSv/h - 40 mSv/h for ¹³⁷ Cs (0.5" detector) (<0.01 mrem/h - 4 rem/h)
	Power and data cables (optional battery available)	Detector Type/s	Cubic 0.5" CLLBC Scintillator Cylindrical 1.5" x 1.5" CLLBC Scintillator	Radionuclide Identification	<0.1 µSv/h - 2 mSv/h for ¹³⁷ Cs (1.5" detector) (<0.01 mrem/h - 200 mrem/h)
	¹⁵² Eu calibration puck	Energy Resolution	~4% FWHM @ 662 keV	Radionuclide Identification	Customizable library of radioisotopes included
	Hex key	Energy Range	40 keV to >3 MeV Gamma and Thermal Neutron Detection	Start-up Time	1 minute
	Exports N42 spectrum file, PDF report	Max. Gamma Ang. Resolution	16° ± 1° (0.5" detector) 20° ± 1° (1.5" detector)	Communication	Ethernet, Wi-Fi

CORIS360® GNI provides remote, rapid and accurate imaging. The 360° × 90° gamma/neutron and panoramic optical field of view enables rapid localization of radiological sources in both open and confined environments. Compact and portable with an IP54 rating, CORIS360® GNI includes two plug-and-play detector modules to optimize performance across diverse radiation environments.

The imager can simultaneously image and spectrally resolve multiple radioactive sources in mixed-field environments. The CORIS360® platform technology is designed to improve decision making, reduce risk, and keep people safe from threats by identifying and imaging the exact location of radiation sources.



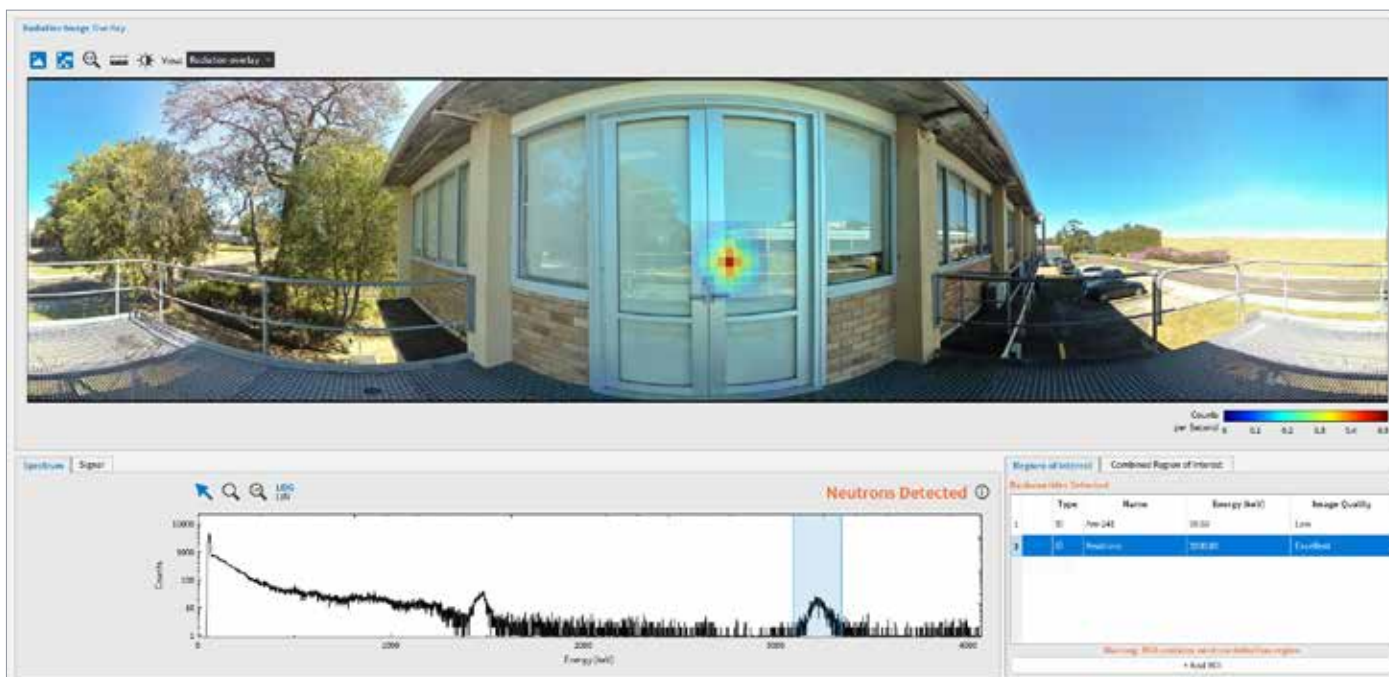
APPLICATIONS INCLUDE:

- Nuclear security and border protection
- Safeguards and defense
- Decommissioning projects
- Nuclear operations
- Nuclear medicine facilities
- Radiation protection

CORIS360® GNI Case Studies



Case Study 1: CORIS360® GNI rapidly detected and localized thermal neutrons from a moderated 9 MBq (243 μ Ci) neutron source hidden within a parked vehicle. CORIS360® GNI was at a standoff distance of 4 metres (13 feet) from the vehicle and imaged the neutrons in <15 minutes.



Case Study 2: CORIS360® GNI rapidly detected and localized thermal neutrons from an AmBe neutron source (22,000 n/s) that was moderated, during an external building search scenario. CORIS360® GNI was at a standoff distance of 2 metres (6.5 feet) from the building and imaged the neutrons in <15 minutes.

CONTACT US

For case studies and technical reports, please get in touch.

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Product By



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Gamma-Ray Imaging
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