



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
	CORIS360® Imaging and processing software
	Tripod (optional tripod mount to image full 4π available)
	Ruggedised carry case
	Two CLLBC detectors
	Power and data cables (optional battery available)
	^{152}Eu calibration puck
	Hex key
	Exports N42 spectrum file, PDF report

Dimensions	210mm × 425mm (D × H) 8.3" × 16.8" (D × H)	Imaging Region of Interest (ROI)	Peaks and non-peaks Thermal neutron region
Weight	15 kg 33 lbs	Radiation Field of View	360° × 90° (Horizontal × Vertical)
Power Supply	100 VAC - 240 VAC (47 Hz - 63 Hz) Input	Optical Field of View	360° × 90° (Horizontal × Vertical)
Operating Temperature	5°C - 40°C (Ambient) 41°F - 104°F (Ambient)	Angular Response	Uniform sensitivity over field of view
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)
Detector Type/s	Cubic 0.5" CLLBC Scintillator Cylindrical 1.5" × 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)
Energy Resolution	~4% FWHM @ 662 keV	Start-up Time	Customizable library of radioisotopes included
Energy Range	40 keV to >3 MeV Gamma and Thermal Neutron Detection	Communication	1 minute
Max. Gamma Ang. Resolution	16° ± 1° (0.5" detector) 20° ± 1° (1.5" detector)		



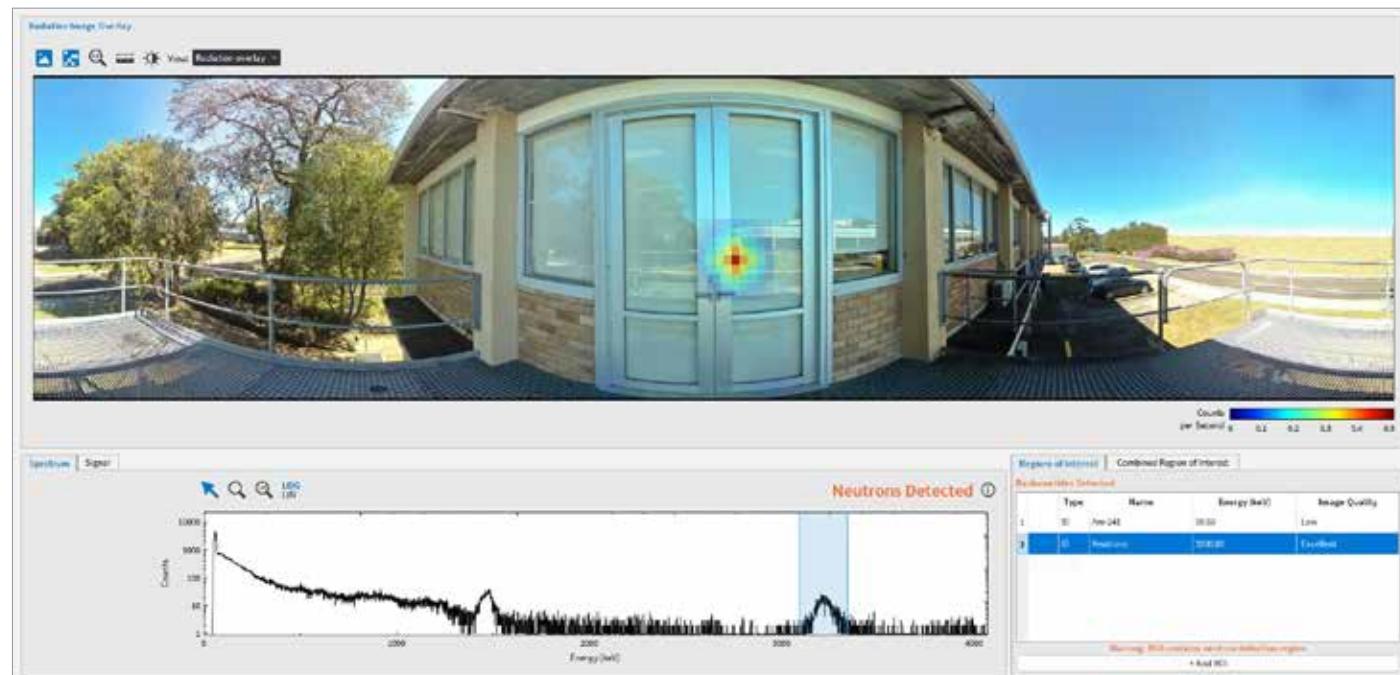
APPLICATIONS INCLUDE:

- 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 µCi) 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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