CORIS360® GNI 2.0

The CORIS360® Gamma Neutron Imager (GNI) 2.0 is a new, ruggedized model with features that include reduced weight (less than half the original model at 6.8 kg/15 lbs) and greater than 30% reduction in size. In addition, it offers integrated hot-swappable batteries, mountable ruggedized tablet, and a wider vertical field of view. CORIS360® GNI 2.0 boasts these new features and more, all while maintaining the same world class performance. The new model comes with an updated user interface, adding new capabilities and designed to be even more user-friendly. CORIS360® GNI 2.0 remains the only commercial technology capable of imaging both gamma-rays and thermal neutrons.

Utilizing an advanced mask design and patented compressed sensing technology, CORIS360® GNI 2.0 delivers dual gamma-ray and thermal neutron imaging up to ten times faster than conventional methods.

CORIS360® GNI 2.0 provides remote, rapid and accurate imaging. The 360° 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 IP65 rating, the imager 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, localizing both multiple point sources and dispersed radiation fields.

CORIS360® GNI 2.0 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. 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.



CORIS360® GNI 2.0 Specifications

SYSTEM INCLUDES

- CORIS360® GNI 2.0 imager
- Mountable ruggedized tablet
- Tripod (optional tripod mount to image full 4π available)
- Ruggedized carry case
- Two CLLBC detectors
- Power and data cables
- Hot-swappable batteries and charging equipment (imager and tablet)
- ^{152}Eu calibration puck
- Exports N42 spectrum file, PDF report

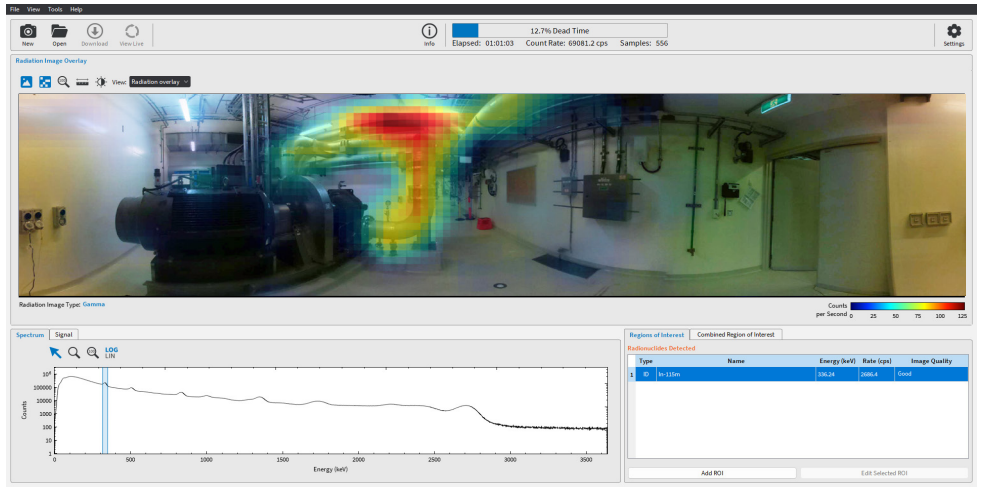
Dimensions	190 mm × 330 mm (D × H) 7.5” × 13” (D × H)
Weight	6.8 kg | 15 lbs
Power Supply	Internal battery (8-hour runtime) 100 VAC - 240 VAC (47 Hz - 63 Hz) Input (mains power)
Operating Temperature	-20°C - 50°C (Ambient) -4°F - 122°F (Ambient)
Storage Temperature	-20°C - 50°C (Ambient) -4°F - 122°F (Ambient)
Detector Type/s	Cubic 0.5” CLLBC Scintillator Cylindrical 1.5” x 1.5” CLLBC Scintillator
Energy Resolution	~4% FWHM @ 662 keV
Energy Range	40 keV to >3 MeV Gamma and Thermal Neutron Detection/Imaging
Max. Gamma Ang. Resolution	15° ± 1° (0.5” detector) 20° ± 1° (1.5” detector)

Imaging Region of Interest (ROI)	Peaks and non-peaks Thermal neutron region
Radiation Field of View	360° × 110° (Horizontal × Vertical)
Optical Field of View	360° × 90° (Horizontal × Vertical)
Angular Response	Uniform sensitivity over entire field of view
Gamma Dose Rate Range	<0.1 µSv/h - 40 mSv/h for ^{137}Cs (0.5” detector) (<0.01 mrem/h - 4 rem/h) <0.1 µSv/h - 2 mSv/h for ^{137}Cs (1.5” detector) (<0.01 mrem/h - 200 mrem/h)
Radionuclide Identification	Customizable library of radioisotopes included
Start-up Time	1 minute
Communication	Ethernet, Wi-Fi

CORIS360® GNI 2.0 Applications

By accurately imaging radiation across the full energy range, CORIS360® GNI 2.0 delivers operational benefits for many industry applications, including:

- Border protection and national security
- Defense and military
- First responders
- Safeguards
- Decommissioning and decontamination
- Nuclear reactor operations
- Health physics



Imaging of plant room identified and located ^{115m}In, determining which pipes contained the radionuclide and the sections of the piping where the ^{115m}In was concentrated.



CORIS360® GNI 2.0 rapidly detected and localized thermal neutrons from a moderated 9 MBq (243 µCi) neutron source hidden within a parked vehicle. CORIS360® GNI 2.0 was at a standoff distance of 4 meters (13 feet) from the vehicle and imaged the neutron source 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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Patent Protected
Gamma-Ray Imaging
US 10,795,036 B2 | US 11,346,964 B2
EU & UK 3146527 | AU 2015263838