

CAMÉRAS CZT ET GAMMA



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Partner **BSI**



Baltic Scientific Instruments (BSI) is an OEM manufacturer based in Riga, Latvia, dedicated to the development and production of advanced spectrometric and detection equipment. With decades of experience and roots in the former Research Institute for Radioisotope Apparatus (RNIIRP), BSI provides cutting-edge technologies for nuclear power, environmental monitoring, security, medicine, and scientific research.

The company specializes in HPG_e, Si, CdZnTe/CdTe, and scintillation detector systems, known for their accuracy, stability, and performance in demanding analytical environments.

Through continuous innovation, strict quality assurance (ISO 9001:2015), and strong international collaboration, BSI supports customers worldwide in achieving precise and reliable radiation measurement and analysis.

Product offering

**Hand-held Integrated
Gamma Spectrometer**





Hand-held Integrated Gamma Spectrometer

Hand-held Integrated Gamma Spectrometer with an integrated HPGe detector, preamplifier, multichannel analyzer, batteries, and software offers relatively compact, portable solution for high-resolution gamma-ray analysis. Its all-in-one design enhances field usability, requiring no external components for setup.



Application

Hand-held Integrated Gamma Spectrometer is ideal for nuclear safety, environmental monitoring, radiological emergency response, CBRN and waste characterization, it ensures rapid deployment and reliable data acquisition. The integrated system minimizes cabling, reduces noise, and simplifies operation, making it highly efficient for both laboratory and on-site measurements.

Features

- Integrated HPGe Detector - High-purity germanium detector ensures excellent energy resolution for precise gamma spectroscopy
- Embedded Digital Multichannel Analyzer (MCA) - Enables real-time spectrum acquisition and processing without external electronics
- Internal Battery Operation - Offers several hours of autonomous use for field measurements
- Compact All-in-One Design - Reduces cabling and simplifies deployment in any environment
- On-board ruggedized display - large and bright to fit the whole spectrum or a part of it since software is adopted for "mobile view mode"
- Analytical Spectroscopy Software - Supports spectrum analysis, nuclide identification, and reporting
- Advanced Spectroscopy Software - allows applying Monte-Carlo simulation results to the analytical software to make sure correct measurement result in case of complex geometry of the measured object



Partner **3D Plus**



3D PLUS est un fournisseur de premier plan de systèmes d'imagerie compacts et performants basés sur la technologie CZT (tellurure de cadmium et de zinc). Conçues pour des applications exigeantes dans les secteurs de l'espace, de la défense et du nucléaire, ses gamma-caméras offrent une imagerie précise et en temps réel des rayonnements dans des formats compacts et robustes.

Product offering

Spid-X



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Spid-X

In collaboration with the French Atomic Energy Commission (CEA), the Spectro Imager Spid-X has been designed for nuclear safety applications such as radioactive waste monitoring, decommissioning, decontamination or emergency situations.

The device offers fine spectroscopic capabilities embedding ultra-low noise ASICs and CdTe crystal thanks to 3D PLUS electronic components miniaturization technology.

The Spid-X gamma camera allows locating, identifying and measuring the dose intensity of the various radioactive sources that can be found in a nuclear environment. Combined with the small size and lightweight of the device, it brings a fast and efficient diagnostic on site, and can help the decontamination process.

Features

- Identifies and locates the radioactive sources
- Measures the dose of the sources
- Small dimensions : 323 x 110 x 180 mm³
- Light Weight : < 3,5 kg
- Covers large range of energy
- Fine spectroscopic capabilities





Partner **Kromek**



Kromek Group plc est un leader mondial des technologies avancées de détection des radiations, spécialisé dans les solutions compactes et haute résolution pour les applications de sécurité, de défense, de nucléaire et de recherche. S'appuyant sur sa technologie brevetée de semi-conducteurs au tellure de cadmium-zinc (CZT), Kromek propose une gamme polyvalente comprenant des moniteurs portables, des identificateurs d'isotopes portables, des gamma-caméras CZT et des spectromètres de laboratoire.

Product offering

GR Series Gamma Spectrometers



Quant GR1



TN15



Sigma 25/50



RayMon 10



K102





GR Series Gamma Spectrometers

A family of small and light CZT-based Gamma detector spectrometers!



The Kromek GR family is a range of CZT-based high-performance Gamma spectrometers. They are completely self-contained, with built-in preamplifier, shaping amplifier, baseline restorer, pulse height digitizer and HV supply. The digitised pulse heights of detected Gamma signals are sent to a computer via the USB. The unit is powered entirely from the USB bus, so no external power supply is needed.

Can be used for all Gamma radiation detection needs either straight out of the box or built into your own devices. The GR Gamma detectors can be mounted side by side in an array to give you coverage of a large area.

GR1/GR1+ Gamma spectrometer

- Perfect for most uses
- Energy resolution: < 2.5% FWHM @ 662 KeV
- USB output only
- 1 cm cubed CZT detector
- The plus model is available for those that need higher resolution:
- Energy resolution: <2.0% FWHM @ 662 KeV

GR1-A/GR1-A+ Gamma spectrometer

- For those that need extra outputs channels
- Energy resolution: < 2.5% FWHM @ 662 keV
- USB output
- Three MCX connectors that provide energy and timing outputs and gate inputs
- MultiSpect Analysis spectroscopy software included in the price
- 1 cm cubed CZT detector
- The plus model is available for those that need higher resolution:
- Energy resolution: <2.0% FWHM @ 662 KeV

GR05 Gamma spectrometer

- For use in a high-flux environment
- Energy resolution: < 2.5% FWHM @ 662 keV
- Max dose rate approximately 10mSv/hr
- USB output
- Smaller 0.125 cm cubed CZT detector

- For use in high-count (high-flux) environments



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Quant GR1

The Quant GR1 is a complete mobile or benchtop solution for quantifying doses of Gamma radiation released by radionuclides. Its high resolution of <math><2\%</math> and count spectrum range of 4096 channels enables any isotope to be identified and its associated dose quantified, even from complex mixtures.

The ability to quantify radiation doses in real time eliminates the need for further analysis in the lab, as data can both be collected and processed on site, saving time and costs.



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Détection des radiations > Caméras CZT et Gamma

TN15

The Kromek TN15 is a robust, cost effective, self-contained, room temperature Neutron detector without Helium3. The detector surpasses the performance of a 100mm long 13mm³ He tube at 4 atmospheres and does not need cooling as it operates at room temperature.

This highly compact device is completely self-contained, with a built-in preamplifier, shaping amplifier, pulse discrimination, and HV supply.

The digitized neutron data is sent to a computer via the mini-USB which also powers the unit, so no external power supply is required; making the TN15 portable, creating a host of new ways to use and deploy neutron detectors.



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Détection des radiations > Caméras CZT et Gamma

Sigma 25/50

Available in two variations, Kromek's Sigma 25/50 Gamma ray detectors are highly sensitive, fast, and lightweight replacing conventional photomultiplier technology with state-of-the-art silicon photomultipliers (SiPMs).



The Sigma 25/50 Gamma detectors offer up to 32.8cm³ of detection volume, delivered in a package providing significant benefits in cost, size, weight, power consumption and temperature stability.

CsI(Tl) has a light output of 54 photons/keV and is one of the brightest scintillators known. As well as good Gamma photon stopping power this makes CsI(Tl) well suited for Gamma radiation detection.

Robust, Small & Lightweight

The Sigma 25/50 Caesium Iodide Scintillator Radiation detectors are perfect for radiation detection in the field and in the lab owing to their small size. If you need fast detection in an easy to use package this is what you need.

K-Spect & MultiSpect Analysis Integration

Kromek's Sigma 25/50 are available with both K-Spect and MultiSpect Analysis software which provide the spectrum acquisition, display, analysis, and storage functions.

Integration

Due to the discreet nature of the Sigma 25/50, these can be integrated into other systems. We've had them flying on drones and built into larger detector arrays.



RayMon 10

RayMon 10

Un détecteur gamma portable puissant et robuste pour l'identification des isotopes radioactifs à haute résolution. Le RayMon10 est l'un des moniteurs de rayonnement portables les plus puissants et les plus robustes au monde. Il peut être utilisé pour détecter, mesurer et identifier avec précision les radionucléides émetteurs de rayons gamma, fournissant une identification isotopique à haute résolution à l'aide de la dernière technologie de détecteur à semi-conducteurs CZT. C'est une solution tout-en-un à vos besoins d'identification des radionucléides gamma

Il peut produire une variété de rapports, notamment la date/heure, l'identifiant de l'utilisateur, les notes photo et audio, le positionnement GPS, les spectres de rayonnement et l'identification des isotopes.

Les variations des conditions normales de fonctionnement peuvent souvent affecter les performances de l'identification des radio-isotopes. Le détecteur avancé à grille coplanaire CZT d'un centimètre cube du RayMon10 offre des performances plus stables que les détecteurs de type à scintillation.



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Détection des radiations > Caméras CZT et Gamma **K102**

The Kromek K102 accepts amplified shaped pulses from detectors, digitizes the pulse heights, and sends the data to PC via the USB bus.

The Analyser is available with either Kromek's Windows based (7/8/10) K-Spect or MultiSpect Analysis software, which provide the spectrum acquisition, display, analysis, and storage functions.

It is powered through the USB bus so no external power supply is required.

