



Highest  
security without  
operational  
disruption

# Arktis FRPM-B Radiation Portal Monitor

High throughput radiation portal monitor for vehicles

The Arktis FRPM-B allows highly reliable screening of trucks and cargo containers for radiological threats and smuggled materials. Real-time alarm categorization enables high throughput with minimal impact on daily operations and flow of goods. The modular open systems architecture provides highest performance at low total cost of ownership.

#### Key features

- Real-time alarm categorization to ensure optimal threat detection and minimal false alarms
- High detection performance
- Reliable high speed screening
- User friendly software and GUI
- $^3\text{He}$ -free neutron technology (as put forward for DARPA)
- Data transfer to network and central alarm station, secure remote access can be set up
- US Govt. compliant Replay Tool allows modeling system performance
- Compatible with third party software and Megaports Initiative interfaces

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Arktis FRPM-B primary screening radiation portal monitors zoom in on available signatures and select those with high threat parameters. During a learning phase, alarm parameters are tailored to adapt to the stream of commerce, minimizing nuisance alarms. Data can be transferred to a central alarm station and to a secure network. <sup>3</sup>He-free neutron detectors in combination with rugged PVT based gamma detectors enable optimal compliance to ANSI standards. System designed to specifications of most recent US DHS procurement.



Specifications	FRPM-B
Dimensions	2 pillars per lane, each with dimensions: Height: 3663 mm Width: 1040 mm Depth: 750 mm including steel structure
Detection Performance	According to ANSI N42.35-2016
Data Output	Conform to ANSI N42.42, TSA protocol or to customer requirement. pdf report for each alarm or occupancy available. Provides alarm classification, alarm status, gamma count rates, neutron count rates and background count rates directly to third party user interfaces. Flexible software architecture allows simple integration into existing infrastructure. The data output of the neutron detectors also meets the system interface requirements of the DARPA Sigma Program, which requires that networked data be transmitted to a central location via 4G networks for real-time analysis.
Gamma Detectors	18 liter (30 x 120 x 5 cm <sup>3</sup> ) plastic scintillators (PVTs) with integrated MCA (multichannel analyzer) The detectors provide gamma radiation sensitivity in the energy range from 30 keV to about 3 MeV, ensuring static efficiency and dynamic sensitivity in the whole detection range.
Neutron Detectors	The neutron detectors are based on proprietary Rugged-by-Design™ Technology, using noble gas and <sup>6</sup> LiF to deliver high performance at low cost. The technology is similar to the one put forward under DARPA's Sigma Program. The detectors are insensitive to microphonics and magnetic fields and have high gamma immunity (better than 10 <sup>-7</sup> ).
Alarm Categorization	Alarm categorization allows optimal threat detection and minimal false alarm rate.
Peripherals	Occupancy sensors; optional: CCTV, OCR, LPR, audible/visual alarm annunciation.
Operating Temperature	-30°C - 55°C (down to -40°C optional)
Ingress Protection	IP56 (other IP levels possible)

## Arktis Radiation Detectors Ltd

Räffelstrasse 11, 8045 Zürich, Switzerland  
sales@arktis-detectors.com, www.arktis-detectors.com

## For additional information contact:

EMEA: emea@arktis-detectors.com, +41 44 559 11 11  
USA: americas@arktis-detectors.com, +1 703 682 70 33