

Flat Panel Gamma Detector (FPG)

Chip-based, large area gamma radiation detector



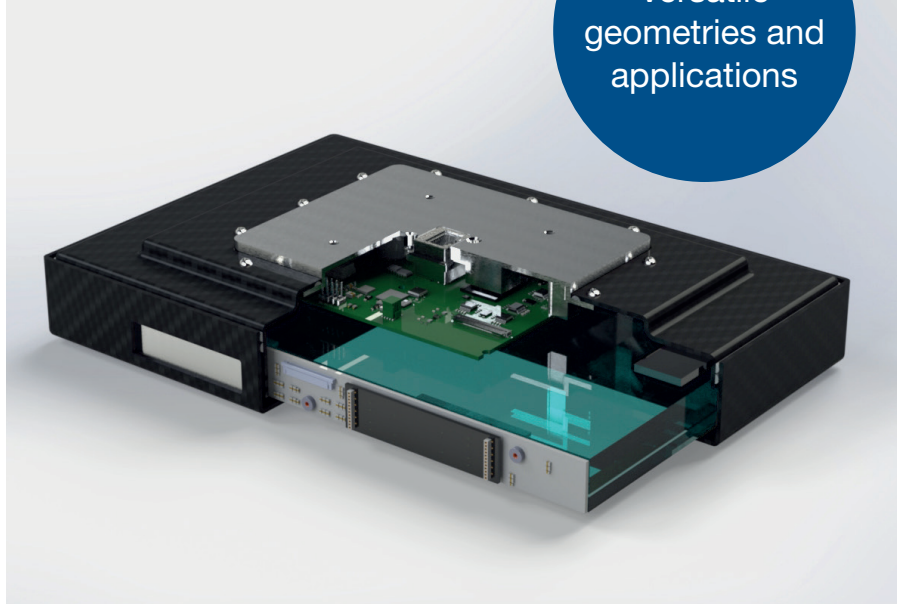
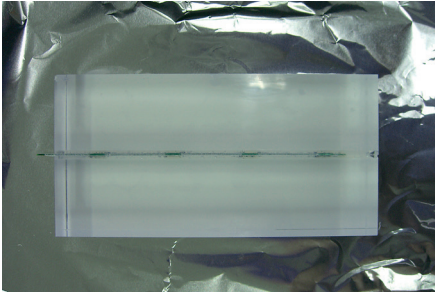
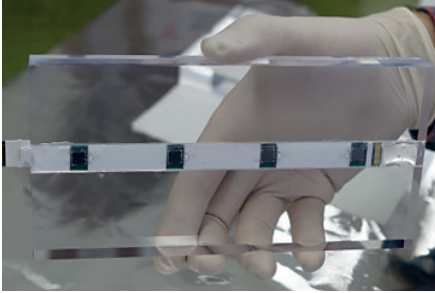
Compact
performance

Arktis' Flat Panel Gamma (FPG) detectors are compact and robust, easy to integrate radiation detectors. They use Silicon Photomultiplier SiPM chips and dedicated electronics to provide a powerful detector; insignificantly larger than the scintillator tile itself. The FPG's Ethernet connectivity and high interoperability make it easy and cost effective to integrate into x-ray systems and body scanners, upgrading these to reliably detect radiological threats.

Key features

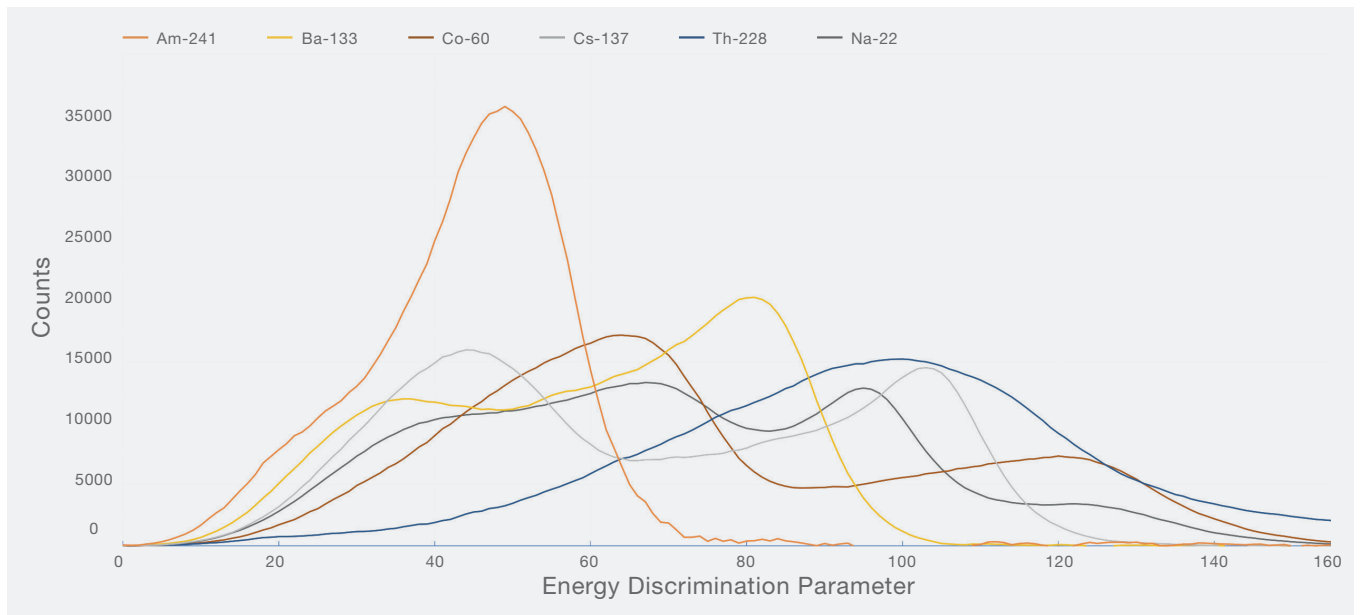
- Thin, compact tiles
- Easy integration via Ethernet (PoE)
- Operate even in high electromagnetic backgrounds
- Spectroscopic source discrimination
- Low power consumption
- Not sensitive to shock or vibration

Versatile geometries and applications



Unpacked assemblies showing the solid state light readout embedded with the scintillator.

Power over Ethernet (PoE): The Ethernet port at the top of the device allows plug-and-play operation. The signal processing board (green) is visible in the cutaway above.



FPG technology allows isotope discrimination. The plot above shows the FPG's clear distinguishability of the isotopes Co-60, Cs-137, Na-22 and Co-60 by means of the energy discrimination parameter developed by Arktis.

Specifications				
Dimensions	8.5 cm x 18.5 cm x 29.5 cm (exterior) 4.8 cm x 15.5 cm x 25.0 cm (fiducial)			
Weight	3.6 kg			
Power & Connectivity	Power over Ethernet			
Detection efficiency for incident gamma rays (intrinsic)	²⁴¹ Am (60 keV) 5%	⁵⁷ Co (~122 keV) 12%	¹³⁷ Cs (662 keV) 45%	⁶⁰ Co (~1200 keV) 35%



Arktis Radiation Detectors Ltd
Räffelstrasse 11, 8045 Zürich, Switzerland
<https://www.arktis-detectors.com>

For additional information contact
EMEA: emea@arktis-detectors.com, +41 44 559 11 11
USA: americas@arktis-detectors.com, +1 571 478 0575