

D230A UAV Gamma Ray Spectrometer Data Sheet

The D230-A is a compact lightweight self-contained gamma ray spectrometer for UAV integration. Designed with exploration in mind the D230A can be used to measure the total gamma ray intensity across landscapes for geological mapping.



D230A mounted on UAV

The standard package contains two 104cm³ Bismuth Germanate (BGO) or Sodium Iodide (NaI) detectors with 1024 channels. Spectra of both detectors are accumulated and saved separately, with a scanning rate adjustable from one second up to one minute. For smaller UAVs with a limited payload a single detector system can be provided to reduce the weight of the instrument.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	145mm x 78mm x 260mm	3.5kg (dual detector)

Technical Specifications

Detector:	2 x BGO - 104cm ³ , with bi-alkal PMT Sensitivity 2 x 160cps / MBq/m (Cs-137). Resolution max 11.5% FWHM (661keV) or 2 x NaI/Tl, 104cm ³ , with bi-alkal PMT. Resolution max 8% FWHM (661keV)
Spectrometer:	Full Digital 2 x 1024 channel, 40MHz DSP, Linear Energy corrected, Pile-up rejecter, 200n resolution, Max throughout 250,000 cps per detector.
Sampling Rate:	User selectable, minimum 1 per second

Energy Range:	25keV-3000keV
Display:	LCD 2 x 20 characters
Control:	Single button operation
Data Storage:	Min 2 x 20,000 samples with full spectra, including GPS coordinates, Stabilisation spectra and system messaged log. sufficient to hold a full days survey data. Memory size can be extended.
GPS:	Navigate down to -162dBm and -148dBm coldstart, precision 2m
Communication:	Data transfer, remote control and diagnostic by USB 2.0
Power:	Rechargeable Li-Ion 7.2V/2200 mAh- minimum 4 hours operation at 20 degrees C.External charger and battery pack.
Temperature Range:	-10 degrees C to 50 degrees C.
Dust and Water:	IP-40 not dust or water resistant