



X-RAY IMAGING EUROPE

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GMCA

Dual channel digital Multi Channel Analyzer

XIE introduces a novel dual channel digital Multi Channel Analyzer for gamma radiation spectroscopy, the GMCA. The two channels can work in coincidence mode to increase the photopeak efficiency. Detector events can be read out using a list mode and stored in up to three spectra for the single channels, the coincidence only and the coincidence sum. The GMCA uses state of the art DSP techniques with trapezoidal filtering, baseline restoration and pile-up rejection. This allows high energy resolutions with numerous semiconductor and scintillator detectors. A programmable detector signal generator can be used to emulate spectra inside and outside the device. All voltages necessary for operating detectors with preamplifiers can be supplied as well as two temperature regulated voltages for Peltier coolers. The GMCA optionally houses a micro-PC. This allows spectroscopic operations without the need of an additional laptop or PC.



GMCA - Dual Channel digital Multi Channel Analyzer specifications

Signal input range	Dual 2 V peak to peak, 50 Ω / 10 k Ω , AC (10 μ F) / DC coupling
Signal input sampling frequency	Dual 40 MHz ADC (20 MHz analog bandwidth)
Signal shaping	Trapezoidal filtering with ballistic deficit reduction
DSP features	Baseline restoration and pile-up rejection Coincidence mode for photopeak efficiency enhancement Programmable detector signal generator
Spectrum size	Triple up to 8192 channels with 32 Bit depth
Signal output range	Dual 0...2 V
Signal output frequency	Dual 20 MHz DAC (10 MHz analog bandwidth)
Peltier regulation output	Dual \pm 6 V, 6 A
High voltage supply	Dual up to \pm 4 kV 1 mA (single polarity)
Preamplifier voltage supply	\pm 6 V, \pm 12 V, \pm 24 V
LC Display	2 x 8
Supported detectors	CZT, Si, HPGe, LaBr ₃ , SrI ₂ , NaI, CsI, etc.
Stand-alone system	PC-card integration (optional)
Connectivity	RS232 / USB2.0 / Ethernet (optional)
Dimensions (WxHxD)	100 mm x 80 mm x 100 mm