

# GammaPro™ 1410/1408

## Digital Multi Channel Analyzer

The models **GammaPro 1408** and **GammaPro 1410** are digital gamma spectrometers designed to optimize the performance of NaI(Tl) gamma-ray detector assemblies and other scintillation types. These units comprise a miniaturized preamplifier, a low ripple high voltage supply, and a digital MCA with 4096 channel resolution based on a 32-bit RISC microprocessor. Power is provided by Power over Ethernet (PoE) via the integrated RJ-45 Ethernet interface. The option to provide power over a DC adapter is available where the integration of the unit is better facilitated by using power.



The GammaPro family is designed to be easily networkable over Ethernet and to provide the best possible energy resolution. The unit is designed to draw low power reducing heat emission in order to facilitate integration in an existing enclosure.

The Gamma 1408 is compatible with 8 stage Photomultiplier Tubes (PMTs) while the 1410 is compatible with 10 stage PMTs.

The Gamma Pro units are delivered with our “NuFocus” software which provides both detector control and quantitative specific nuclide analysis. While the standard unit delivers excellent energy resolution with a wide range of PMTs the unit may be optimized for a specific PMT typically yielding 0.1% to 0.2% better energy resolution for that PMT.

### Key features

- PoE (Power over Ethernet) and digital MCA for Plug & Play
- Integrated RJ-45 Ethernet interface for maximum throughput
- High voltage control for optimum dynamic range performance
- Supplementary analog anode output for timing applications
- Specific nuclide analysis software for quantitative analysis

### Applications

- High performance NaI(Tl) spectroscopy
- Homeland Security
- Large area environmental monitoring networks
- OEM Applications
- Teaching and research
- Nuclear Medicine

### Plug-in & Play & Auto calibration

The software automatically recognizes detectors connected to the Ethernet network and completes connection automatically. An auto-calibration feature maintains a precise calibration and may be manually overridden by the user whenever desired. Installation of a new or replacement detector is completed by initiating the auto-calibration routine for that detector.



### Standard Performance

Dynam ic range	20 to 3000 keV
Resolution <sup>1)</sup>	6.5% ± 1% @ 662keV(Cs-137)
Count rate	up to 150,000 cps
Operating Temperature	-15°C(5°F)~50°C(122°F)

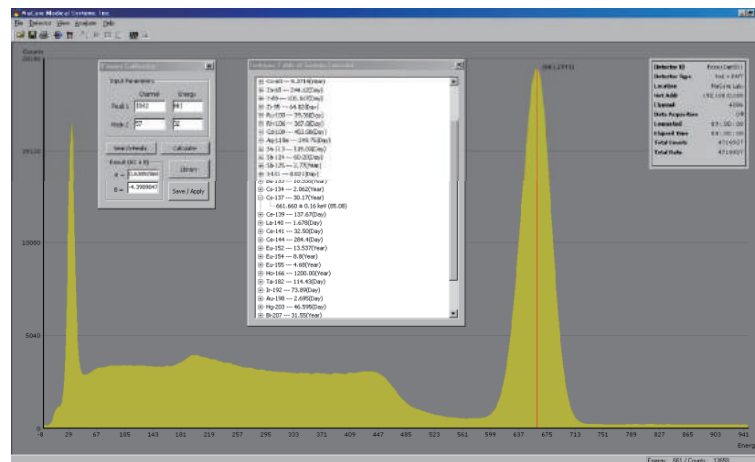
1) With a 2" by 2" NaI(Tl) detector

### Specifications

Digital MCA	32 bit RISC, ARM® Cortex™-M3	Network	RJ-45 Ethernet
Conversion	12 bit (4096 channel)	Weight	330 g (0.37 lb)
Input Power	PoE compliant (to 802.3a) or 5V DC adaptor	Dimensions	59(∅)×125(H) mm 2.3(∅)×4.9(H) in.

### Detector Control and Data Analysis

- Detector control features include automatic detector identification, TCP/IP setup, acquisition control, detector reset, gain control and other functions.
- Quantitative spectral analysis features include spectrum generation, peak detection, energy calibration, file processing, radionuclide library management, DAQ status monitoring and much more.
- Designed to support both end-user and OEM applications



Spectrum of Cs-137