

APV8008A / APV8016A

The measurement board conforms to the VME standard size* and incorporates digital signal processing (DSP) capabilities designed for gamma ray spectroscopy across up to 16 systems. It directly accepts signals from detector preamplifiers, digitizes them using a high-speed ADC (100Msps, 16-bit), applies trapezoidal filtering via FPGA, extracts pulse peak values, and generates spectra. Measurement data is transmitted to a computer via Gigabit Ethernet. Even with multiple boards in use, it maintains precise timing akin to list mode, making it well-suited for large-scale systems. Additionally, it now includes updated real-time spectrum analysis software as a standard feature.

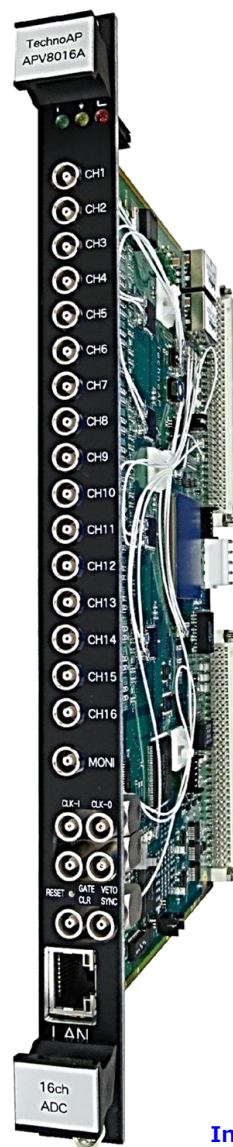
*VEM bus is not supported

Features

Suitable Detectors	Semiconductor Detectors such as Ge, CdTe, Si, etc. Scintillator Detectors such as LaBr3(Ce), NaI(Tl), etc.
Energy Resolution	1.6~2.2keV@1.33MeV, Ge Semiconductor Detector
Throughput	> 200kcps
Integral Non-linearity	< ±0.025% (typ.)
Differential Non-linearity	< ±1.0% (typ.)
Mode	Histogram/ List/ Wave Reading
Spectrum Analysis Software	Gauss Fit Analysis, Peak Search Analysis, Dead Time Adjustment, Energy Correction, Half Width Correction

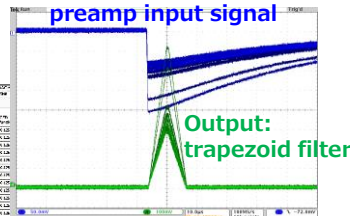
Specifications

Analog Input	8/16 ch, LEMO Connector Rang: ±2V, Input Impedance: 1kΩ
Analog Gain	Coarse Gain x1, x2, x5, x10
ADC	100Msps, 16bit
ADC Gain	16k, 8k, 4k, 2k, 1k, 512, 256 ch.
Digital Signal Processing	Trapezoidal Filter Rise time: 0.1~20μs (0.01μs step) Flattop time: 0.05~2μs (0.01μs step) Timing Filter, Baseline Restorer, Pileup Rejecter, Auto-pole zero, Auto-threshold, etc.
Digital Gain	Course Gain x1, x2, x4, x8, x16, x32, x64, x128 Fine Gain x0.3333~x1.0000
External Control	GATE Input, VETO Input, Clear Input, Clock Input/Output etc., LEMO Connector
Communication I/F	Gigabit Ethernet, TCP/IP, UDP
Power Consumption	+5V(max 4.0A), +12V(max 2.0A), -12V(max 0.4A) *VME Powered Create
Dimension Weight	20(W)x262(H)x187(D) mm *attachment excluded, approximate 460g
Application	Data Measurement Control, Spectrum Analysis Software

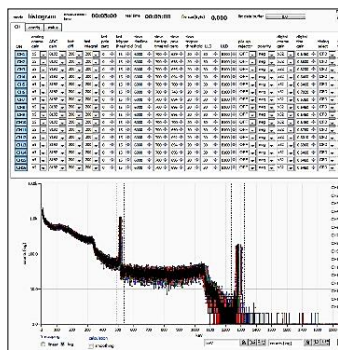


APV8016A

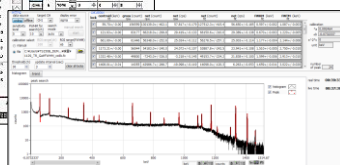
Input:
preamp input signal



Output:
trapezoid filter



Histogram Mode



Peak Search Analysis

*Images is for illustration purpose.

*Please note that contents may change without prior notice.

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