Digital Signal Processor

TechnoAP

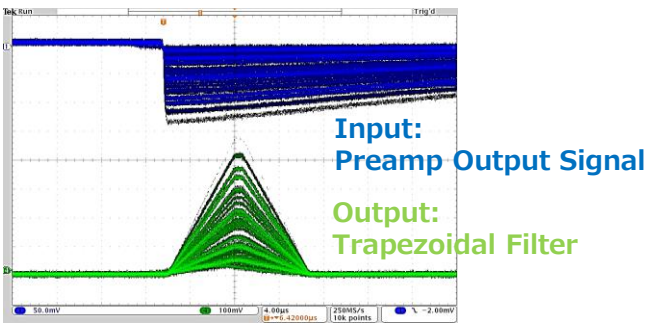
APV8008A

Input 8CH

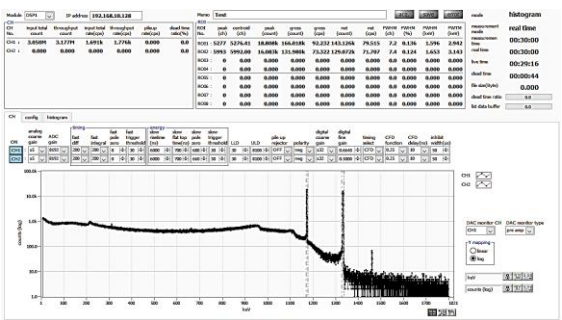
The board is equipped with a Digital Signal Processing (DSP) function for gamma-ray spectroscopy. The preamplifier signal of the germanium semiconductor detector is directly input, and digital signal processing is performed by a high-speed ADC (100MHz, 16-bit) and a highly integrated FPGA. It also uses the latest FPGA, which improves time accuracy by 16 times compared to previous products. It is also equipped with Gigabit Ethernet to enable large amounts of list data transfer. In addition, measurements can be made while maintaining time accuracy even when using multiple boards, making it ideal for large-scale systems.

Specification

Analog Input	8-channel, LEMO connector Input Impedance: 1kΩ
Course Gain	x1, x2, x5, x10
ADC	Input Signal: ±2V 100MHz, 16-bit resolution
ADC Gain	16k, 8k, 4k, 2k, 1k, 512, 256
Trapezoidal Filter	0.1 から 12 μs (0.01 step)
Digital Signal Processing	Baseline Restorator、 Pile-up Rejectors, CFDs, etc.
External Terminals	Filter Waveform Output, CLK Input, GATE Input, VETO Input, Clear Input, 2 systems for function expansion, LEMO connector
Communication I/F	LAN TCP/IP, Gigabit Ethernet
Dimensions	VME 6U 1width 20(W) x 262(H) x 187(D) mm
weight	approx. 400 g
Power Consumption	+5V:2A, +12V:0.05A, -12V:0.04A
Energy Resolution	1.70keV@1.33MeV
Output	100kcps/ch. or more
Operating Modes	Histograms, Lists
Multifunctional	Spectroscopic Amplifiers, Timing Filters, CFDs, Inputs and Filter Waveform Output DACs
Options	Coincidence measurement, Rise-wave measurement
Accessories	Application software (Windows version GUI format) Instruction Manual



Preamp Output Signal and Trapezoidal Filter (DAC output)



Application (Histogram)

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