

Digital Signal Processor APV8016A

Input 16 Ch. 100 MHz 16-bit ADC High time resolution

Japan Made

VME

20181107

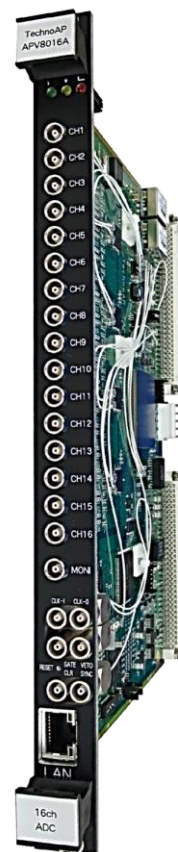
Digital signal processing (DSP) for gamma ray spectroscopy
Accuracy of time resolution has been greatly improved.

Feature

- Channel: **16 channels simultaneous sampling**
- Energy Resolution: **1.70 keV @ 1.33 MeV**
- Time resolution: **39.062 ps (minimum unit)**
- Throughput: **100 kcps or more**
- Mode: **Histogram, list, waveform**
Maximum transfer rate in list mode 1.5 Mcps (when 1 channel is used)
- Form: VME 6U size or Unit
- Communication I / F: **TCP / IP, Gigabit Ethernet**
- Option: **Coincidence and Rise Wave**
- Accessories: With application and hardware / software manual

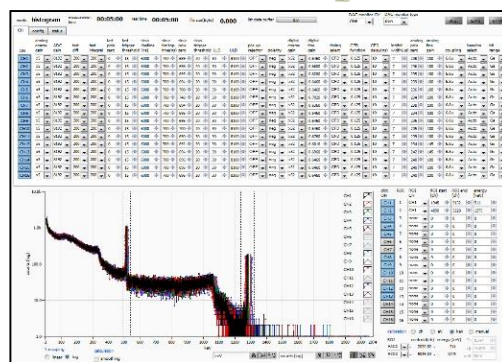
Overview

This is a radiation measurement board equipped with digital signal processing (DSP) function for gamma ray spectroscopy. The preamplifier signal of the germanium semiconductor detector is directly input to this board, and digital signal processing is performed with high speed ADC (100 MHz · 16-bit) and high integrated FPGA. Using the latest FPGA, the time precision has been improved 16 times more than conventional products. Since Gigabit Ethernet is installed, it is possible to transfer a lot of list data. Even when using multiple boards, it can be measured while maintaining time accuracy, making it ideal for large scale systems.

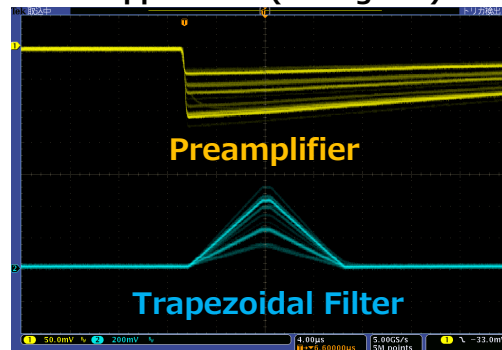


Specification

Analog Input	16 Ch. LEMO connector Input impedance: 1kΩ
Course Gain	x1, x2, x5, x10
ADC	Input signal: ±2 V 100 M SPS, Resolution: 16-bit
ADC GAIN	16k, 8k, 4K, 2K, 1K, 512, 256 ch.
Trapezoidal Filter	0.1 to 12 μs (0.01 step)
Digital Signal Processing	Baseline Restorer, Pileup Rejecter, CFD etc. All parameters setting by PC
Terminals	Filtered wave output, Clock input, GATE input, VETO input, Clear input, 2 inputs for Expansion of functions, LEMO connector
Communication I/F	TCP/IP, Gigabit Ethernet
Dimension (Unit: mm)	VME 6U: 20(W) x262(H) x187(D) Unit: 300(W) x56(H) x335(D)
Weight	VME 6U: About 460g Unit: About3360g



Application (Histogram)



DAC output

Supports Special order and custom firmware

*Images is for illustration purpose.
*Please note that contents may change without prior notice.

Website



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