

Ultra High Rate MCA

MCA with ultra high-speed successive approximation type ADC installed independently for all channels.

CHANNEL: All 8CH ADC

THROUGHPUT: 130kcps or more (High energy γ ray)
250kcps or more (Low energy X ray)

RESOLUTION: 130eV @ MnK α (Si (Li) detector)

INTEGRAL NONLINEARITY: $\pm 0.025\%$ (typ.)

DIFFERENTIAL NONLINEARITY: $\pm 1\%$ (typ.)

GAIN DRIFT: TDB

MODE: Histogram and List

Max. transfer rate: 160 Kcps when 1CH is used

COMMUNICATION I/F: TCP/IP, UDP

SOFTWARE: Application and Hardware / Software manual



8CH Unit type APU8208



VME Rack 5 slot



VME Rack 20 slot

APV8208 Size: VME6U

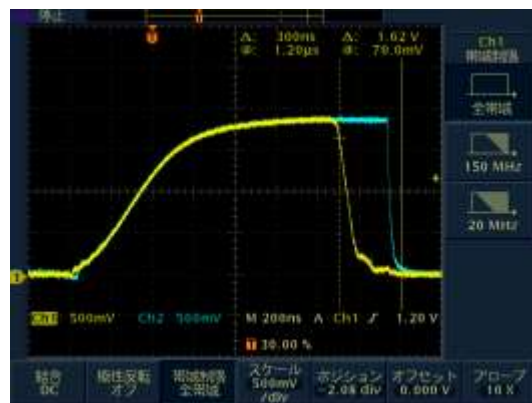
*For multi channel use

OVERVIEW

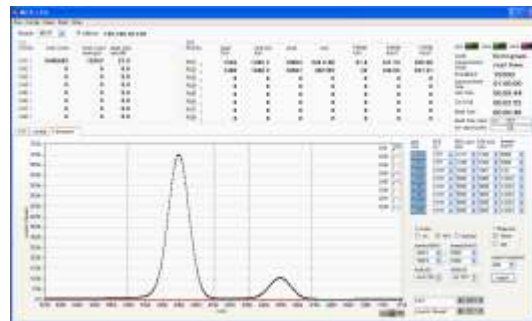
APV8208 is a high-speed multichannel analyzer (MCA) equipped with latest successive approximation type ADC for all CH of VME 6 U size. Adopt 360 ns successive approximation type ADC. Fixed conversion time (processing from peak detection to ADC conversion, memory rewriting, peak reset) is short, it can be used for high counting rate which can not be realized, multichannel nuclear experiment, synchrotron radiation experiment and so on. In the newly added Fast Pulse peak detection mode, conversion processing is performed after pulse peak is detected. Processing can be completed within the pulse until 0.25 μ s pulse shaping. Very high throughput can be provided. This has a LIST mode that outputs timestamp and wave height information for each event. It is possible to collect up to 160 Kcps (per board) via Ethernet.

SPECIFICATIONS

Analog Input	8CH
Input Range	0 - 10V pulse
Entrant Pulse Width	100ns (min.) - 100 μ s (max.)
ADC Gain	16K, 8K, 4K, 2K, 1K, 512, 256ch
Fixed Dead Time	360ns
Peak Detect Mode	Fast pulse or Absolute pulse
Threshold	0-50% Full-scale from PC
ADC LLD	0-100% Full-scale from PC
ADC ULD	0-100% Full-scale from PC
ADC ZERO	0-2% Full-scale from panel VR
Real Time Preset	Day
Time base	40ns
Analysis Mode	Histogram / List
Interface	Ethernet
External Dimensions	VME6U 20(W) x 262(H) x 187(D) UNIT 300(W) x 26(H) x 335(D)
Weight	VME6U about 410g UNIT about 3400g
Environmental Condition	Operation temperature 0 - 40 $^{\circ}$ C No dew condensation



[Yellow] Amplifier Input [Blue] Fast pulse peak detect



Application of Histogram and Waveform

*Images is for illustration purpose.

*Please note that contents may change without prior notice.

TechnoAP

Design and fabrication of electronic circuit associated with measurement control and radiation measurement

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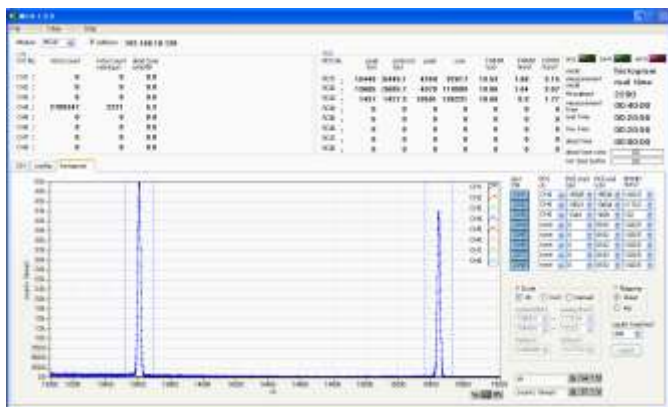
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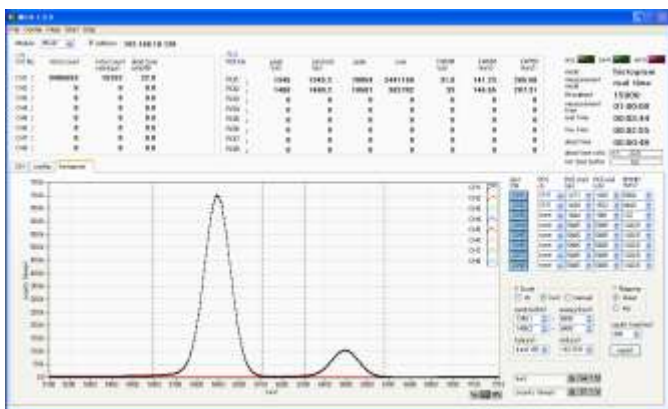
Updated on 2017/11/01

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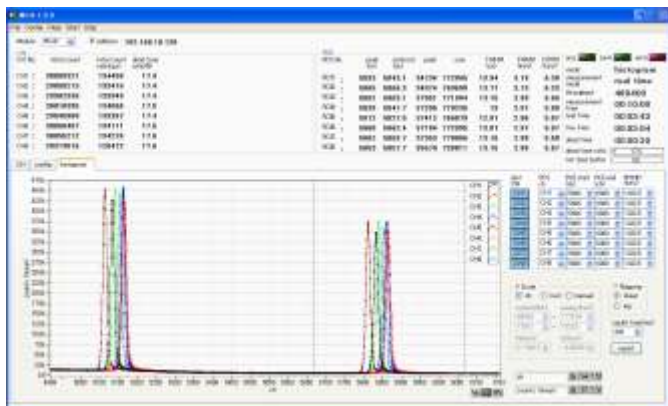
PERFORMANCE



**HPGe Detector 1.68KeV@1.33MeV
*2Kcps 6μs Pulse Shaping**



**Multi SSD 141eV@5.9KeV
*15Kcps 3μs Pulse Shaping**



**HPGe Detector 3KeV@1.33MeV
Each channel 130Kcps throughput 1.5μs
Gated integrator shaping**

INSPECTION



We are testing and inspecting using Ge semiconductor detector and Si (Li) semiconductor detector owned by our company.

ACCESSORIES

- Hardware and Software Instruction Manual
- *You can download the latest version on our HP.
- Input AC cable 3P (Only unit type)
- Application for software CD-ROM (Windows ver.)

We also accept lending of products and offer in-house demonstrations.



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