

# Digital Spectrometer APN101

Digital Spectrometer within high-voltage power supply

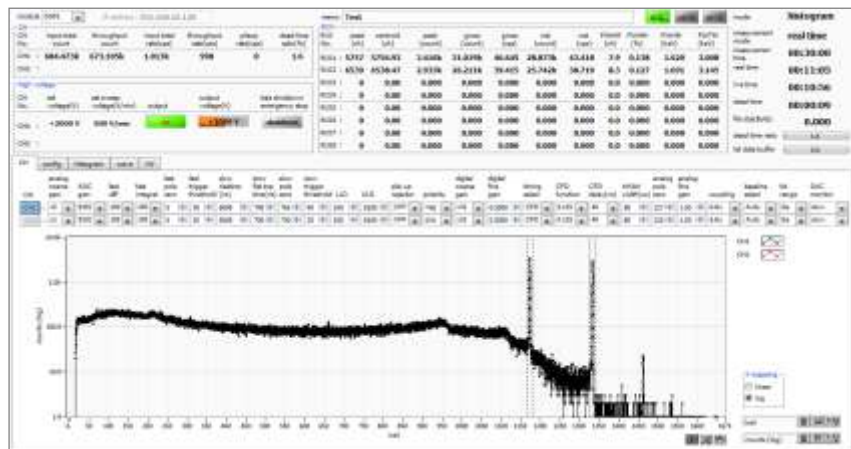
MADE IN JAPAN

NIM

APN101(1CH) is all-in-one digital spectrometer which has high-voltage power supply, preamp power, and MCA (Multi Channel Analyzer). Preamp signal of the detector is directly input to the APN101, and the digital signal processing is processed a high-speed ADC (100MHz·14Bit) and highly-integrated FPGA. The measurement data will be transferred to the PC via Ethernet.

- Intended detector **Semiconductor detectors (Ge, CdTe, Si) Scintillation detectors (LaBr<sub>3</sub>(Ce), NaI(Tl), CsI(Tl)), etc.**
- Resolution **1.7keV@1.33MeV (Ge semiconductor detector) 2.8 ~ 3.5%@662keV (LaBr<sub>3</sub>(Ce) scintillation detector)**
- Throughput **100kcps and over**
- Mode **Histogram, Waveform**
- Multiple functions **Spectroscopy amp, Filter shape output DAC**
- High-voltage power **Max ±4000V (Max. 1.0mA)**
- Software **Included with application and instruction manual**
- Interface **Ethernet (TCP/IP)**

## Application



e.g. Histogram measurement



APN101 (Front)

APN101 (Rear)

## Specifications

|                              |  |
|------------------------------|--|
| Analog Input                 | 1CH, ±1V range, Input-Impedance: 1kΩ   |
| Analog Gain                  | Coarse Gain: x2, x4, x10, x20, Fine Gain: x0.5~x1.5                                      |
| Sampling Rate                | 100MSPS (Resolution: 14Bit)  |
| ADC GAIN                     | 8K, 4K, 2K, 1K, 512, 256ch   |
| Digital Processing           | Trapezoidal Filter: 0.1~16μs, Baseline Restorer, Pileup Rejecter, Coarse Gain, Fine Gain |
| High-voltage                 | 0V ~ ±4000V (max: 1.0mA), Ripple: 20mVp-p (typ.) Bias shut down input.                   |
| Preamp Power                 | ±12V, ±24V (NIM-standard)  |
| Interface                    | Ethernet (TCP/IP)  |
| Dimension (Unit: mm), Weight | NIM1U[34(W) x221(H) x249(D)] (Without connector), About 980g                             |
| Power consumption            | 12V (0.6A)   |
| Operating Condition          | Temperature: 0~40°C, No dew condensation   |
| PC requires                  | Windows 7 (32/64bit), Display: WXGA and over   |
| Accessory                    | Application, Manual  |

## Unit Type



APU101 (Front)



APU101 (Rear)

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

# TechnoAP

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Updated on 2017/03/29