

APN101X

This is a digital spectrometer that combines the three functions required for a silicon drift detector: **Multi-channel analyzer (MCA), High-voltage power supply and Preamplifier power supply**. For measurement, the preamplifier signal of the detector is directly input, and digital signal processing is performed using a high-speed ADC (100 MHz, 14-bit) and a highly integrated FPGA. **Data is transferred to the PC via Ethernet.**

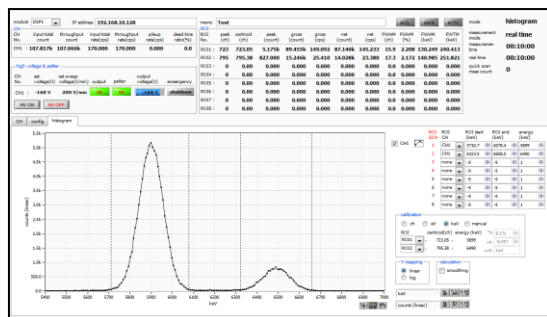
Features

Detectors	Solid State Detector (SSD) or Silicon Drift Detector (SDD)
Energy Resolution	SSD 139eV@5.9keV, Peaking Time 6μs 250eV@5.9keV, Peaking Time 0.5μs SDD 125eV@5.9keV, Peaking Time 2μs 145eV@5.9keV, Peaking Time 0.5μs
Output	1Mcps or more
Functions	Histogram Spectroscopy amplifier ROI-SCA Quick-Scan Filtered waveform output DAC



Specifications

Analog Input	1 channel Range: ±1V, Input impedance: 1kΩ
Analog Gain	Coarse x1, x4, x10, x20
Sampling	100Msps, 14-bit
ADC gain	4096, 2048, 1024, 512, 256 ch.
Digital Signal Processing	Trapezoidal filter: 0.05 ~ 12μs Fine Gain: x 0.333 ~ x 1.0 Baseline restaurateur, Pileup rejector
High Voltage P.S.	-200V, Max. 1mA
Preamplifier P.S.	±5V, Max. 60mA
Peltier colling P.S.	+1.7V, Max. 1A
Communication I/F	Ethernet, TCP/IP or UDP
Power consumption	+6V: 0.9A +12V: 0.3A -12V: 0.1A +24V: 0.2A
Front panel	Emergency stop button, High voltage monitor LED Input LEMO connector: CLEAR, CLK, GATE, QSG, Output LEMO connector: AUX1, AUX2 (ROI-SCA out) BNC connector: Input for preamplifier output signal Out LEMO connector: DSP internal processing waveform observation RJ-45 connector: Ethernet
Rear panel	出力LEMO端子 : AUX3, AUX4(ROI-SCA出力) 検出器用電源出力コネクタ NIMピン電源コネクタ
Dimensions (mm) Weight (g)	34(W) x 221(H) x 249(D) *Without connector Approx.. 960



Data acquisition software included

Sample program

Python

Visual C++

Linux

Visual C#

LabVIEW

Downloadable from our website

*Images is for illustration purpose.

*Please note that contents may change without prior notice.

TechnoAP Co., Ltd.

2976-15 Mawatari, Hitachinaka, Ibaraki, Japan

Postcode:312-0012 info@techno-ap.com

TEL:+81-29-350-8011 FAX: +81-29-352-9013



<https://www.techno-ap.com>



20230731