Digital Spectrometer for X-ray

TechnoAP

APU101X

UNIT

ROI-SCA

Quick-Scan

This is a digital spectrometer that combines the three functions required for a silicon drift detector: <mark>Multi-channel analyzer (MCA), High-voltage power supply and Preamplifier power supply</mark>. 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. <mark>Data is transferred to the PC via Ethernet.</mark>
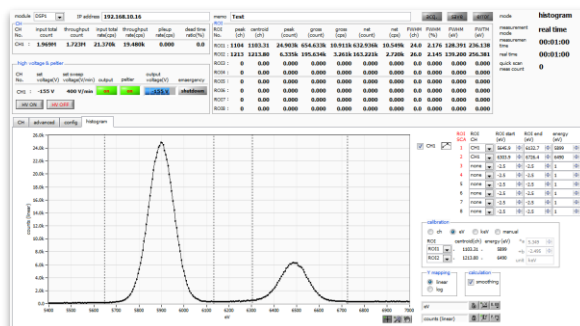
FRONT

BACK

Features

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Energy Resolution	125 eV @ 5.9 keV, Peaking Time 2 µs 145 eV @ 5.9 keV, Peaking Time 0.5 µs
Output	1 Mcps or more
Functions	Spectroscopy amplifier ROI-SCA Quick-Scan Filtered waveform output DAC

Specifications

Analog Input	1 channel, Input range: ±1 V Input Impedance: 1 kΩ
Analog Gain	Coarse x5, x10, x20
Sampling Rate	100 Msps, Resolution: 14-bit
ADC GAIN	8192, 4096, 2048, 1024, 512, 256 ch.
Digital Processing	Trapezoidal Filter 0.1 to 16 µs Fine Gain: x0.333 to x1.0 Baseline Restorer Pileup Rejector
High Voltage Power supply	-200 V, Max.: 1 mA
Preamplifier Power supply	± 5 V, Max.: ± 60 V
Peltier cooling Power supply	+ 1.7V, Max.: 1 A
Communication I/F	RJ-45 connector, Ethernet TCP / IP or UDP
Dimensions	210 (W) x45 (H) x275 (D) mm *without connectors
Weight	1530 g
Power consumption	AC 100 V (AC adapter included)

Data acquisition software included

Python Linux LabVIEW Visual C++ Visual C#

We provide sample program free
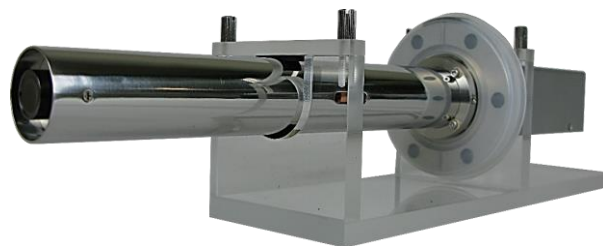
Silicon Drift Detector manufactured by TechnoAP

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