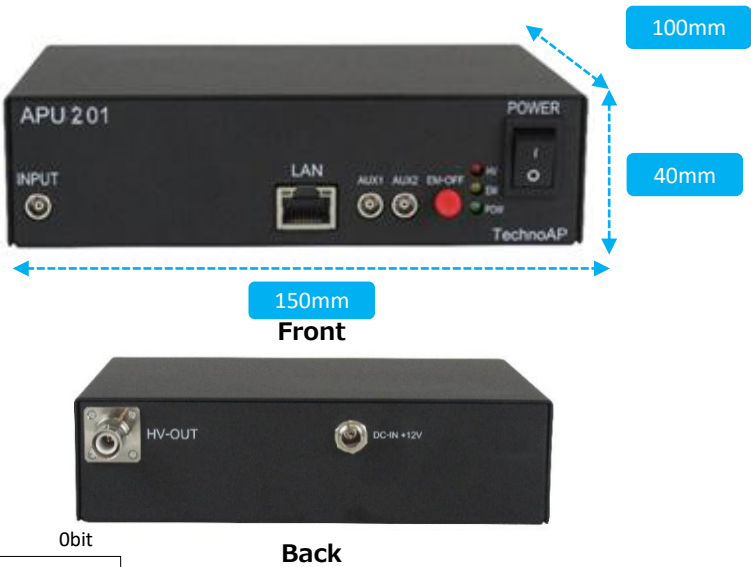


APU201-M

This is a lightweight, compact desktop-type digital pulse processor that integrates a digital pulse processor and a high-voltage power supply into a single unit. It features a high-speed, high-resolution 500 Msp/s / 14-bit ADC. The system enables comprehensive analysis of signals from a photomultiplier tube (PMT) anode, including timing (CFD-TDC), energy (QDC), and pulse shape discrimination (PSD). Data is transferred to a PC via Gigabit Ethernet, and list waveform data can be acquired for repeated analysis.

Features

| | |
|---------------------|--|
| Applicable Detector | LaBr ₃ (Ce), NaI(Tl), Digital Pulse etc. |
| Gain Switching | x0.5, x1.0, x1.5, x2.0, x2.5 |
| Time Resolution | Coarse : 2ns Fine : 7.8 ps LSB |
| Throughput | Over 2Mcps / Channels |
| Mode | Histogram ,LIST, Waveform |
| Option | LIST-WAVE Function, LIST-PILEUP-WAVE Function Pileup-Reject Function |



LIST Data Example *TDC: 1digit = 7.8ps

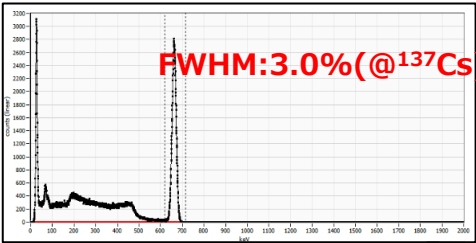
| | | | | | |
|---------|---------|---------|---------|--------|---------|
| 127bit | | 0bit | | | |
| TOTAL | FALL | RISE | TDC | CH | QDC |
| [15..0] | [15..0] | [15..0] | [53..0] | [3..0] | [12..0] |

Sample List Waveform Data

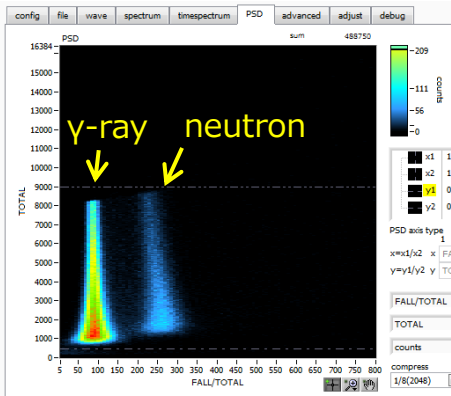
| | | | |
|-----------|-------------|---------|-----------------|
| List Data | Wave Number | Header | Wave Data |
| [127..0] | [15..0] | [31..0] | [15..0] x 波形点数分 |

Specifications

| | |
|---------------------------|--|
| Analog INPUT | 1 Channel, LEMO connector Range ±1V, INPUT impedance 50Ω |
| Rise Time | Less than 2ns |
| Sampling | 500Msp/s, Resolution14bit |
| Digital Processing | CFD, TDC, QDC, PSD |
| High Voltage Power Supply | Max 4000V (1mA) SHV connector *Polarity depends on specifications. |
| External Connector | Two LEMO connectors for function expansion. *Functions can be customized according to specifications. |
| Communication | Gigabit Ethernet, TCP/IP and UDP |
| Power Consumption | 12 V (0.8 A), powered by AC adapter |
| Dimensions Weight | 150 (W) × 40 (H) × 100 (D) mm *excluding protrusions approximately 302 g |
| Accessories | Data Acquisition and Control Software |



Histogram
In the case of a 1-inch LaBr₃(Ce) scintillation detector



PSD capability, n-γ discrimination.
In the case of a stilbene scintillation detector (φ50.8 × 50.8 mm)

