

## XCZT101005-SYS

## SYSTEM

This system uses APU101, which integrates a multi-channel analyzer (MCA), high-voltage power supply, and preamplifier power supply. The measurement data is transferred to the PC via Ethernet.

**Energy Resolution**  
**<1.6% @ 662keV, ICR: 10k**


### System configuration

**Semiconductor detector**  
 CZT101005



**CdZnTe**  
 Crystal : 10 x 10 x 5 mm  
 Body : φ35 x 750 mm  
 Energy Range : ~ 2.0 MeV

**Charge preamplifier**  
 APG1603



Input voltage: 1000V  
 Rise-time: < 40 ns  
 Decay-time: 100 μs

**Digital Spectrometer**  
 APU101



All-in-one signal processor

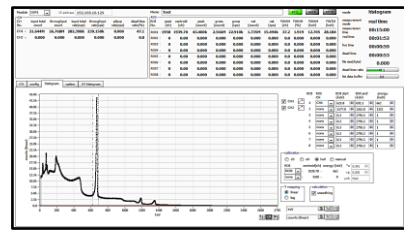
- Multi-channel analyzer (MCA)
- High voltage power supply
- Preamplifier power supply

**Accessories:** Signal cable, HV power supply cable, Preamp power supply cable, Ethernet cable, AC power adapter, Instruction Manual

### Specifications

Analog Input	1 channel, LEMO connector Range: ±1 V, Input impedance: 1 kΩ
Analog Gain	Coarse: x1, x4, x10, x20, Fine: x0.5 to x1.5
Sampling	100 Msps, resolution 14-bit
ADC GAIN	8192, 4096, 2048, 1024, 512, 256 ch.
Digital Signal Processing	Trapezoidal Filter: 0.1 to 16 μs Baseline Restorer and Pile-up Rejecter
Throughput	500 kcps or more
High voltage Power supply	0 V to ± 4000 V (Max. 1.0 mA), Ripple: 20mVp-p (typ.) Bias shutdown input terminal equipped
Preamplifier Power supply	±12 V, ±24 V (NIM standard compliant) Built-in
Front panel	POWER switch, High voltage output emergency stop button, LED for high voltage monitor, LED for dead time monitor, LAN connector port and External input terminal
Back panel	SHV terminal for high voltage power supply, D-sub 9-pin terminal for preamplifier power supply, BNC terminal for preamplifier output signal input, LEMO terminal for DAC-MONITOR output
Communication	Ethernet TCP/IP
Power consumption	DC 12 V, 0.8 A
Dimensions Weight	Apparatus: 210 (W) x45 (H) x275 (D) mm *without connector approx.. 1800 g, Detector: φ 35 x 750 mm, approx. 700 g

**Application software**



- HV power supply control
- Up to 8 types of ROI settings
- Counting rate display

**Sample Program**

- Python
- Linux
- LabVIEW
- Visual C++
- Visual C#

Can be downloaded from our website

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

