This is a device which integrates measuring equipment and power supply equipment necessary for positron annihilation method which can analyze molecular level nanoscale space structure. In lifetime measurement, high-speed pulse signals from two BaF$_2$ scintillators are captured by 3 Gsps board to calculate lifetime. In CDB measurement, coincidence is taken from two HPGe semiconductor detectors, and a two-dimensional histogram is generated from the crest value. Furthermore, AMOC measurement that correlate the lifetime and momentum are also realized by combining these modules.

### Measurement Mode
1. Lifetime
2. Coincidence Doppler Broadening (CDB)
3. Age-Momentum Correlation (AMOC)

### ADC
- **Lifetime**: 2 channels, 3 Gsps, 8-bit
- **CDB**: 2 channels, 100 Msps, 14-bit

### Time Resolution
- FWHM 192 ps (511 keV @ $^{22}$Na, BaF$_2$ scintillator)
- FWHM 160 – 190 ps (Certified standard quartz glass)

### Energy Resolution
- 1.23 keV (512 keV @ $^{106}$Ru)
- 1.69 keV (1.33 MeV @ $^{60}$Co)

### High Voltage Power Supply
- 2 channels, -4000V for PMT
- 2 channels, +5000V for HPGe semiconductor detector
  *Included Preamp power supply

### Communication I/F
- Ethernet (TCP/IP)

### Accessories
- Application Software for Data acquisition, Instruction Manual

### Lifetime measurement mode
- **Stop**: 511 keV
- **Start**: 1.274 MeV
- Radiation source: $^{22}$Na, Sample: Polycarbonate

### CDB measurement mode
- Lifetime spectra

### AMOC measurement mode
- Lifetime - Momentum Correlation 3D graph
- Momentum spectrum
- Lifetime spectrum
- Sample: Silica

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**Manufacture of Radiation and Radioactivity measurement devices**

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