

nanoXRS



Cool as a Human Hand



FEATURES

- Small size, full featured X-Ray Spectrometer with integrated, thermoelectrically cooled Silicon Drift Detector (SDD)
- High counting rate capable ($> 1\text{mln cps}$) at very short shaping times of $\leq 100\text{ns}$.
- User configurable digital pulse processor
- State of the art digital pulse processor with 16-bit low power ADC sampling at 80MHz offering the lowest power without degradation in performance.
- 16k channels utilizing smart spectrum size technology . All spectra are recorded and stored as 16k spectra with instant, distortion free, downsizing during or after spectra acquisition
- Digitally synthesized triangular pulse shapes
- Pulse shape rise time from 25 ns to 25 μs
- Adjustable flat top for all shapes 0 to 2.5 μs
- Static and dynamic control of the ADC input offset
- Configurable two-stage base-line restorer
- Multiple-pole compensation technique for complete elimination of the pulse tailing for enhanced pile-up rejection
- Enhanced pile-up rejector based on pulse-shape analysis
- Novel incoming count-rate estimator with fast discriminator dead time correction
- Automatic thresholds based on statistical noise estimation
- Built-in and signal-interference free Digital Pulser
- Manganese $K\alpha$ line resolution down to 125eV FWHM
- Three performance grades based on FWHM:
 - research grade with FWHM less than 150eV
 - standard grade with FWHM 150eV to 180eV
 - educational/training grade with FWHM greater than 180eV
- Support for OEM SDD vendors
- Interchangeable interface modules for either wired or wireless connectivity: USB, Ethernet, Bluetooth,WiFi, low-voltage UART with open communication protocol
- Single mini USB I/O connector for all interfaces
- Built-in HV power supply 0 to 400V
- Power source 5V - **USB direct**, or power adapter with other than USB interfaces
- Power via I/O connector (USB interface) or through a dedicated mini USB power-connector 5V/500mA
- Built-in thermoelectric cooler with detector temperature stabilization - enhanced cooling enclosure
- Power consumption with USB interface 2.5W (maximum cooling), 1.25W typical at room temperature
- Weight <230g
- Dimensions 4.9" x 1.5" x 1" (125mm x 38mm x 25 mm)
- **labZY-MCA** software for configuration and spectrum acquisition
- For more information visit contact info@labzy.com