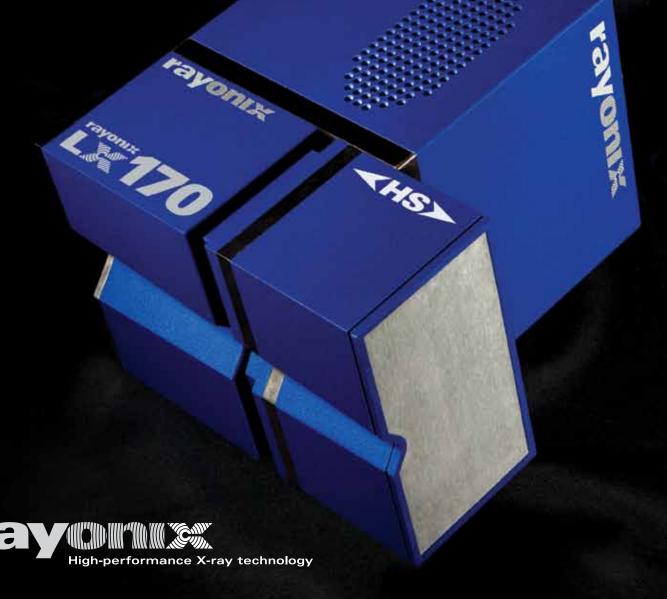




## High-speed WAXS X-ray detector designed for simultaneous SAXS/WAXS

Exclusive Frame-Transfer Technology for high speed X-ray data collection without compromising resolution or data quality

- One millisecond dead time
- Configurable imaging options
- Excellent quantum efficiency
- Superb quality control





In order to allow SAXS to pass through while measuring WAXS, scientists have been asking for an X-ray detector with a hole in the middle. The resulting LX series has a long rectangular detecting surface, engineered with a notch to allow the direct beam and SAXS data to pass through. Designed with the new, exclusive Rayonix chip utilizing Frame Transfer Technology.

User-Configurable Imaging Parameters				
On-Chip Binning	frames/sec	pixel size in micron		
1 × 1	2.5	44		
2 × 2 (standard	d) 10	89		
3 × 3	20	133		
4 × 4	40	177		
5 × 5	55	220		
6 × 6	75	266		
8 × 8	100	354		
10 × 10	140	440		
Noise High S	speed mode: 8 e <sup>-</sup> /pixel	Low Noise mode: 4 e <sup>-</sup> /pixel		



View of the Rayonix Lx170 HS showing the exclusive notch to allow small angle data to pass through to a SAXS X-ray detector:

Technical Specifications				
Sensors	Proprietary Rayonix Frame-Transfer CCD			
Dead Time	1 millisecond			
Full Well Capacity (standard 2 x 2 binning)	400k e <sup>-</sup> /pixel			
Dark Current	0.003 e <sup>-</sup> /pixel/second or 0.0004 photons/pixel/second (12keV)			
Electro-optical Gain	7e <sup>-</sup> /12keV photon			
Standard Phosphor	40 micron thick , many custom options available			
PSF, FWHM	100μm with 40μm thick phosphor, 65μm with 25μm thick phosphor			
Sensor Operating Temperature	-80° C			
Fiber-optic Taper Demagnification Ratio	2.92:1			
Cooling	Closed-cycle refrigeration			
Real-time data collection, correction and storage; High volume data storage solutions also available.				

LXHS Model-specific Technical Specifications					
		rayonix 170 <hs></hs>	La 255 <hs></hs>		
FT-CCDs bonded to Fiber-optic Tapers		2 modules 7.4 MegaPixels	3 modules 11 MegaPixels		
Active Imaging Surface		85 mm × 170 mm, 14400 mm <sup>2</sup>	85 mm × 255 mm, 21600 mm <sup>2</sup>		
Readout electronics 16 channels per FT-CCD		32 channels	48 channels		
Physical Dimensions:					
Detector Head	Height × Width × Depth	34 cm × 22 cm × 30 cm	37 cm × 30 cm × 26 cm		
	Approximate Weight	20 kg	30 kg		
Electronics/ Cooling Assembly	Height × Width × Depth	175 cm × 64 cm × 64 cm	175 cm × 64 cm × 64 cm		
	Approximate Weight	215 kg	215 kg		



www.rayonix.com