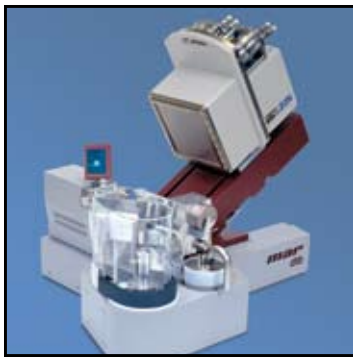


rayonix
mx series

Ultrahigh-performance, high-resolution X-ray detectors

seamless multi-element CCD technology





The Rayonix mx225 is fully compatible with the mardtb automated goniostat and the marcsc automated sample changer.

rayonix
mx series

Technical Specifications		mx225	mx300	mx325	
Type	Multiple CCDs; tiled fiber-optic tapers	9 CCDs; 9 tapers	16 CCDs; 16 tapers	16 CCDs; 16 tapers	
X-ray Sensitive Surface		225mm × 225mm (50,625mm ²)	300mm × 300mm (90,000mm ²)	325mm × 325mm (105,625mm ²)	
Detective Quantum Efficiency	Up to 0.8 for 8keV to 12keV X-rays	•	•	•	
Point Spread Function	FWHM = 100µm; FW 1%M = 300µm	•	•	•	
Gain		6 e ⁻ /12keV photon	6 e ⁻ /12keV photon	5 e ⁻ /12keV photon	
Read Noise*	10 e ⁻ /pixel	•	•	•	
Dark Current*	<0.01 e ⁻ /pixel/sec.	•	•	•	
Full Well Capacity*	360k e ⁻ /pixel	60k 12keV photons	60k 12keV photons	72k 12keV photons	
Dynamic Range	16 bits	•	•	•	
Fiber-optic Tapers		2.7:1	2.7:1	2.9:1	
CCDs	32mm × 32mm; 2048 × 2048 15µm pixels	9 CCDs	16 CCDs	16 CCDs	
CCD Operating Temperature	-70° C	•	•	•	
Cooling	Closed-cycle refrigeration	•	•	•	
Readout Electronics	2 channels per CCD	18-channel readout	32-channel readout	32-channel readout	
Readout Options (Software Selectable):					
	On-chip Binning	Readout Time	Number of Pixels in Image (Pixel Size)		
Standard Mode	2 × 2	1.0 sec.	3072 × 3072 (73µm)	4096 × 4096 (73µm)	4096 × 4096 (79µm)
	4 × 4	0.5 sec.	1536 × 1536 (146µm)	2048 × 2048 (146µm)	2048 × 2048 (158µm)
Computer Interface	PCI DMA; single fiber-optic cable		•	•	•
Physical Dimensions:					
Detector Head	Height × Width × Depth	46cm × 32cm × 40cm	58cm × 42cm × 43cm	58cm × 42cm × 43cm	
	Approximate Weight	52kg	115kg	125kg	
Electronics/Cooling Assembly	Height × Width × Depth	175cm × 64cm × 64cm	175cm × 64cm × 64cm (×2)	175cm × 64cm × 64cm (×2)	
	Approximate Weight	215kg	215kg (×2)	215kg (×2)	

*Specified for standard readout mode



High Efficiency models available
High electro-optical gain design

rayonix

High-performance X-ray technology

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