

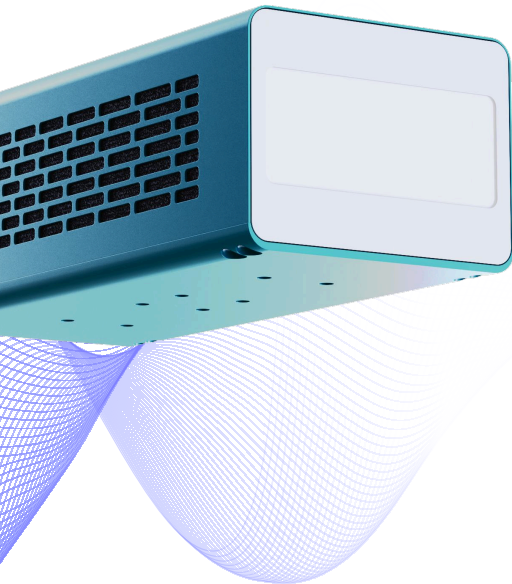
Introducing RAD

Compact X-Ray Detector for Big Discoveries

A compact area X-Ray detector based on the advanced noise-free photon-counting technology, designed for high-performance X-Ray applications.

Key features

	Medipix3RX Asic (CERN technology)		Compact form adaptable for synchrotron and lab. enviroments
	Pixel size: 55 µm x 55 µm		High spatial resolution and detection efficiency
	High-speed data acquisition		Sensors options: Si or CdTe
	High dynamic range: 1-bit, 12-bit, or 24-bit		Advanced air-cooling system



Tech specifications	
Frame rate	• 20,000 fps @ 1-bit • 2,000 fps @12-bit • 1,000 fps @24-bit
Acquisition modes	Sequential or continuous
Readout time	0 @ 1, 12-bit mode 1 ms @ 24-bit mode
Acquisition modes	Dual energy, charge summing mode
Count rate (at 10%)	3.5 × 10 ⁵ ph/s/pixel 1.2 × 10 ⁸ ph/s/mm ²
Software interface	PITEC User Interface EPICS Drivers API for Phyton and C++



Detector model comparison

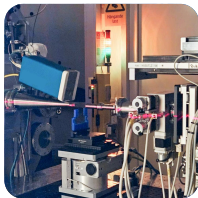
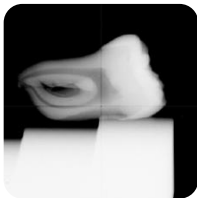
Product	RAD 400K	RAD 500K	RAD 800K	RAD 1.5M	
					
Number of Medipix3RX	1 x 6	2 x 4	2 x 6	4 x 6	2 x 12
Pixels arrangement	256 x 1.536	512 x 1.024	512 x 1.536	1.024 x 1.536	512 x 3.072
Area ≥ [mm²]	14 x 84	28 x 56	28 x 84	56 x 84	28 x 168
Resolution [MP]	~0.4	~0.5	~0.8	~1.5	~1.5
Weight [kg]	2.2	2.3	2.4	6	4
Dimension [mm] (w x h x d)	105 x 80 x 236	105 x 80 x 236	105 x 80 x 236	106 x 130 x 395	202 x 100 x 236

Sensor material

	Si	CdTe
Thickness	500 µm 675 µm	1000 µm
Energy range	6 – 25 keV	8 – 150 keV
Adjustable threshold range	4 – 25 keV	5 – 75 keV

X-Ray Imaging Applications

- X-ray Nanoscopy
 - X-ray Diffraction
- X-ray Micro and Nanotomography
 - X-ray Scattering (SAXS/WAXS)



Talk to an X-ray specialist →

✉ sales@pitec.co

☎ +55 19 99769-0041

🌐 www.pitec.co