



Product Sheet XRD 54

The EIGER2 R Family

- The Next Generation HPC Detector for the Most Powerful XRD Platform

The EIGER2 R 500K and 250K are multi-mode (0D/1D/2D) detectors designed specifically for laboratory instruments. The EIGER2 R is based on the next generation of Hybrid Photon Counting (HPC) technology developed by Dectris Ltd.

Intense collaboration during development of the EIGER2 R family and our continuous partnership has resulted in an exceptional level of physical integration into Bruker AXS' D8 ADVANCE and D8 DISCOVER and digital integration into the measurement and analysis software

DIFFRAC.SUITE, empowering users to take full advantage of the impressive detector features.

- Seamless integration of 0D, 1D and 2D detection in step, continuous and advanced scanning modes
- Ergonomic, alignment-free detector rotation to optimize γ or 2θ angular coverage
- Panoramic, tool-free diffracted beam optics using the complete detector field of view
- Continuously variable detector positioning to balance angular coverage and resolution

Detector Specifications		Benefits
Field of View	500K: $77.1 \times 38.4 = 2961 \text{ mm}^2$ 250K: $38.4 \times 38.4 = 1475 \text{ mm}^2$	Coverage optimization through alignment-free detector rotation
Number of Pixel	500K: $1028 \times 512 = 526,336$ 250K: $512 \times 512 = 262,144$	Excellent spatial resolution across the active area
Pixel size	$75 \times 75 \text{ }\mu\text{m}^2$	Optimized for maximum angular resolution and minimum photon loss due to charge sharing effects
Discriminators	2, lower and upper threshold	Improved signal-to-background through reduction of fluorescent and cosmic radiation
Count rate capability	$>3.6 \times 10^8 \text{ ph/s/mm}^2$	High dynamic range measurements, such as XRR and HRXRD, without the need for absorbers
Operation	Media-free, no gas or water cooling	No additional equipment or consumables Low cost of ownership
Energy range	5 keV to 23 keV	One detector for all common wavelengths, from Cr up to Ag radiation
Robustness	Radiation hard Maintenance-free	Not damaged by direct beam Low cost of ownership
Compatibility	D8 ADVANCE and D8 DISCOVER	Full featured multi-purpose XRD solutions
Sample-to-Detector Distances	100 mm – 350 mm (D8 ADVANCE) 100 mm – 500 mm (D8 DISCOVER)	Continuously variable detector positioning for optimum angular resolution versus coverage

Order Numbers

A24D620	EIGER2 R 500K
A24D626	EIGER2 R 250K
A24D624	Gamma Optimization Plate for GISAXS and in-plane GID
A24B636	Panoramic Axial Soller 1.5°
A24B637	Panoramic Axial Soller 2.5°
A24B638	Panoramic Axial Soller 4°
A24D650	Panoramic Evacuated Flight Tube (EFT), short
A24D651	Panoramic Evacuated Flight Tube (EFT), medium
A24D652	Panoramic Evacuated Flight Tube (EFT), long
A24D621	Universal Detector Mount Plus, 258 mm
A24D622	Universal Detector Mount Plus, 214 mm
A24D623	Universal Detector Mount Plus, 150 mm

EIGER2 γ -optimized



EIGER2 2 θ -optimized



EIGER2 with EFT



 **Bruker AXS GmbH**
info.baxs@bruker.com

Worldwide offices
bruker.com/baxs-offices

Online information
bruker.com/xrd

bruker.com

