

EIGER2 R 250K - HPC just how you need it

Just like its larger siblings, the smaller and more economical EIGER2 R 250K comes with all the high end-features of DECTRIS' HPC technology. It is an ideal solution for all measurement setups with a limited field of view that cannot take full advantage of our larger detectors. The EIGER2 R 250K achieves high resolution thanks to direct detection and a small pixel size, and it features DECTRIS Instant Retrigger for superior count rate performance. This allows both for superior dynamic range and accurate measurements of even the highest intensities commonly observed with laboratory sources. Dual energy discrimination over a wide range of energies gives you extensive possibilities to reduce the background in your experiments.

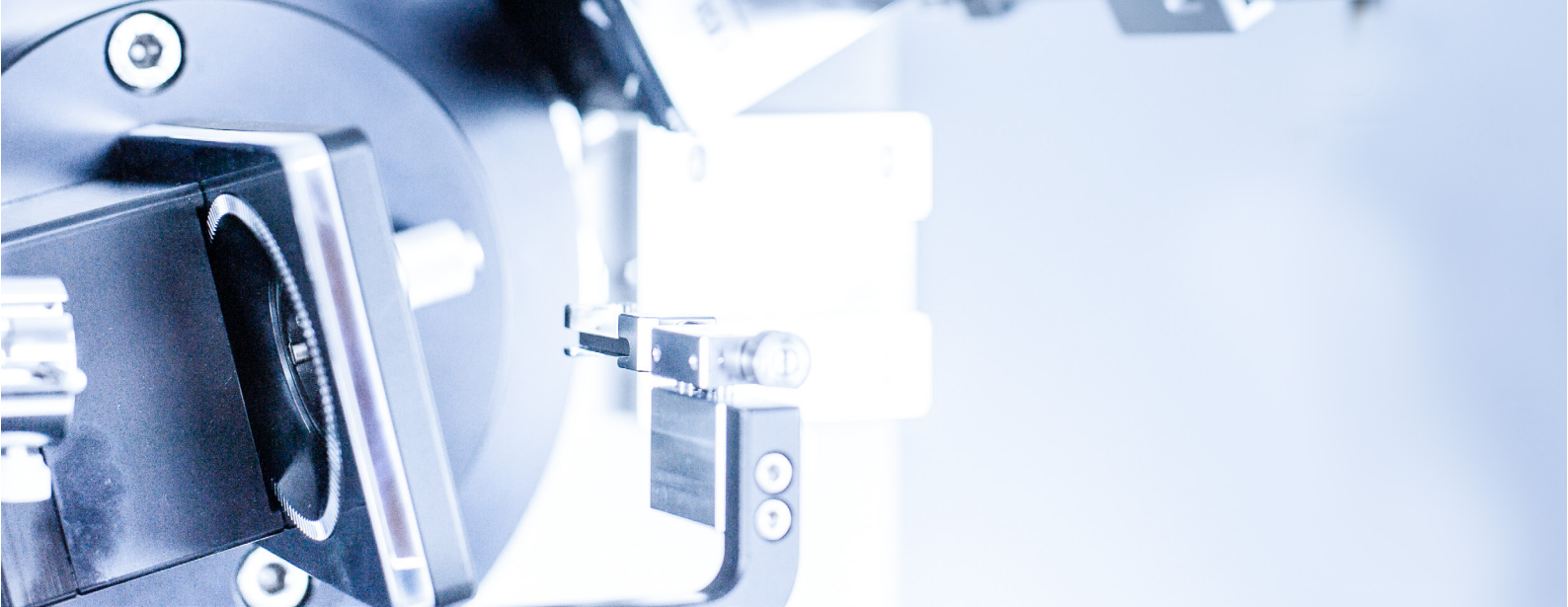
The high frame rates of the EIGER2 R 250K allow for fast continuous scans without compromising resolution. Whether you are integrating the detector as an end user or an instrument manufacturer, you will appreciate its easy-to-use http-based RESTlike API that is identical for all EIGER2 detectors. All these benefits come in a maintenance-free detector with DECTRIS' proven reliability.

Key Advantages

- The highest possible dynamic range thanks to zero detector background, superior count rates, and simultaneous read/write
- Direct detection and a small pixel size for high resolution
- Dual-energy discrimination for suppression of low- and high-energy background
- High frame rates for continuous scans with high resolution
- Media and maintenance free for simple and reliable operation

Applications

- X-ray powder diffraction
- SAXS/WAXS
- X-ray reflectometry
- Grating incidence diffraction
- High resolution reciprocal space mapping
- Non-ambient diffraction
- High resolution XRD



Technical specifications

EIGER2 R 250K

Number of detector modules (W x H)	1
Sensitive area, width x height [mm²]	38.4 x 38.4
Pixel size [μm²]	75 x 75
Total number of pixels	512 x 512 = 262,144
Energy-discriminating thresholds	2
Threshold range [keV]	3.5 - 30
Maximum frame rate [Hz]	50
Counter depth [bit/threshold]	2 x 16
Acquisition mode	Simultaneous read/write with zero dead time
Maximum count rate [cps/mm²]	6.9 x 10 ⁸
Point-spread function	1 (FWHM)
Vacuum compatibility (optional)	Yes
Image bit depth [bit]	100 x 140 x 93
Weight [kg]	1.8
Cooling	Air-cooled

All specifications are subject to change without notice.

