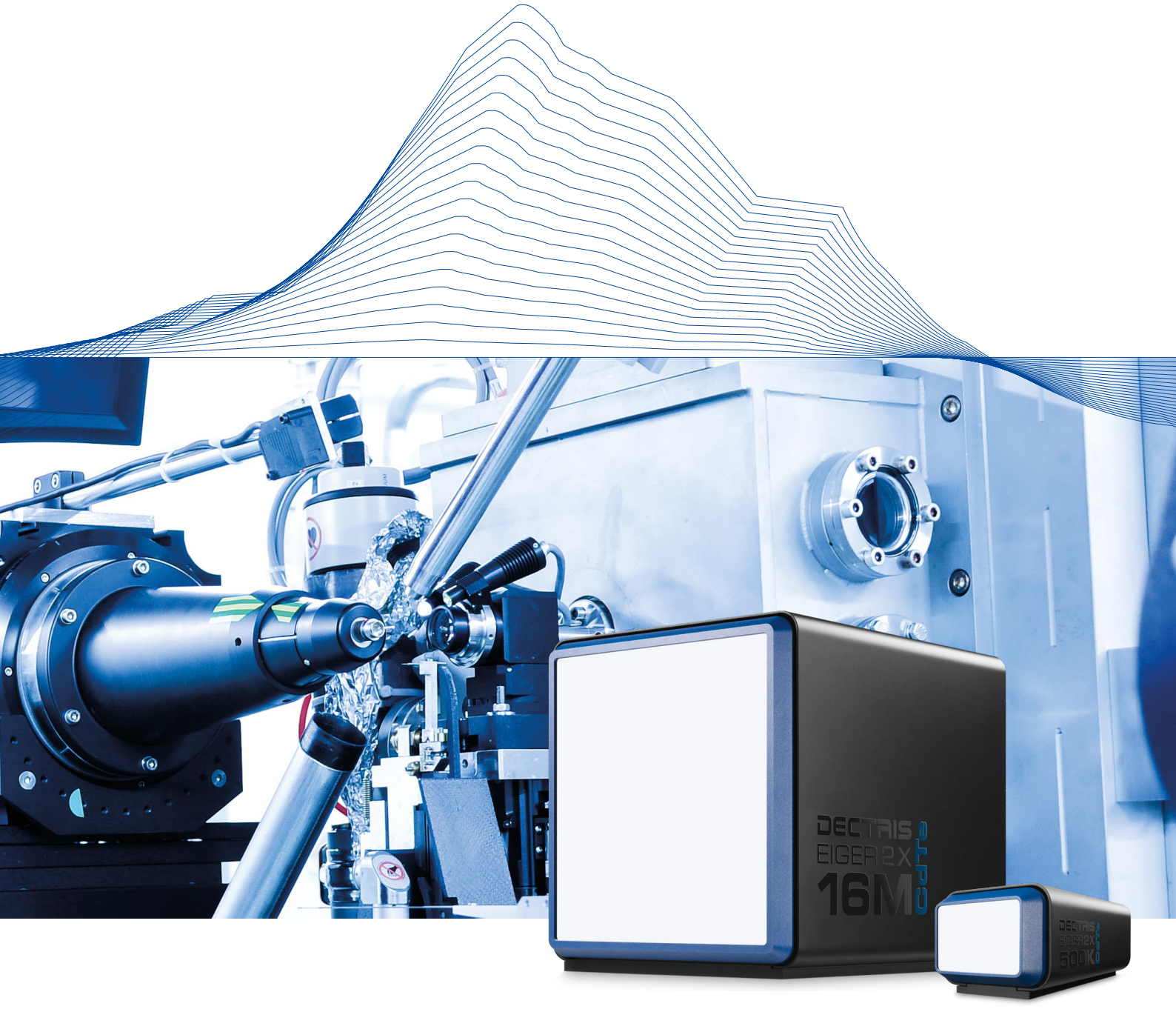
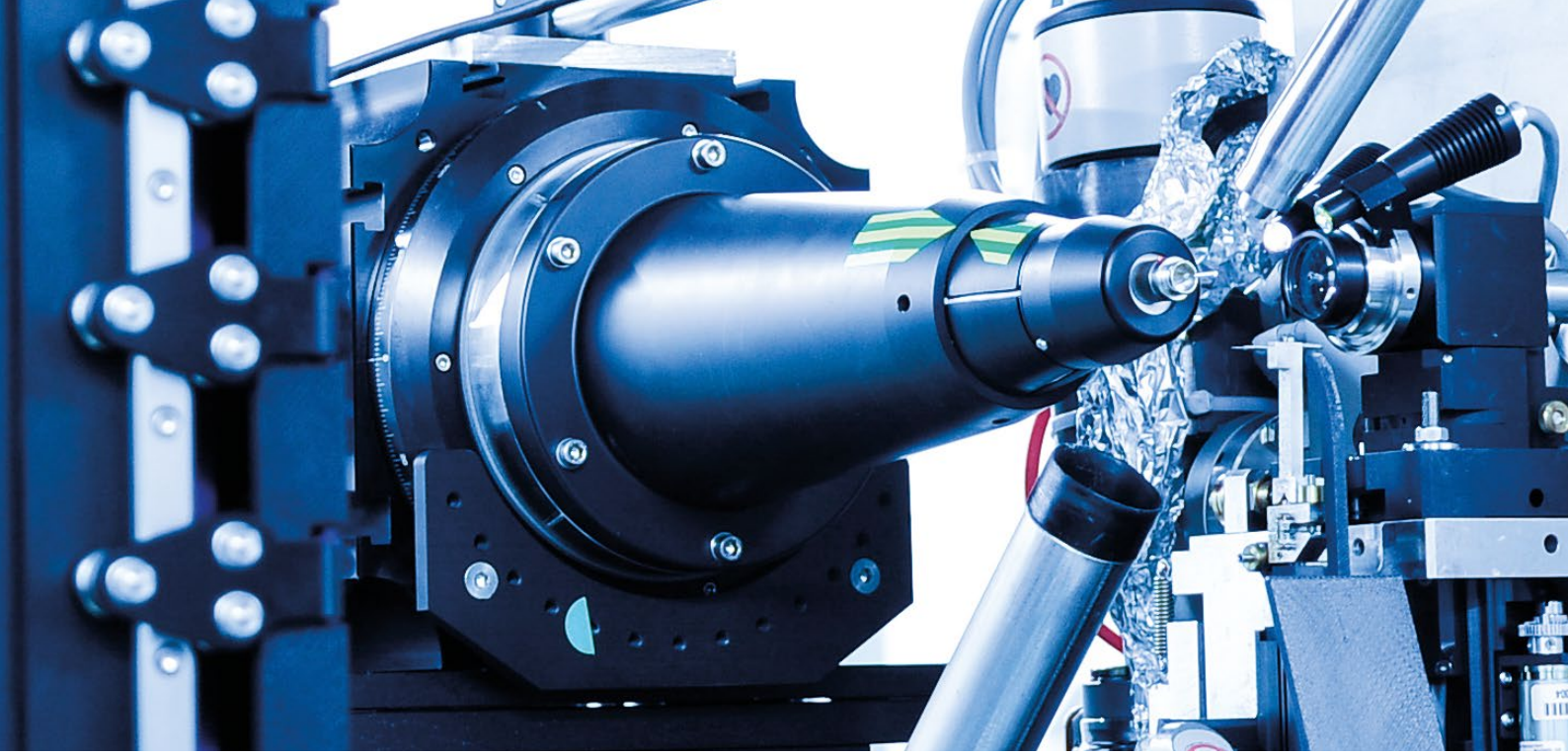
DECTRIS
detecting the future




# EIGER2 X CdTe

*High resolution at high energies*



## Cutting-Edge Technology for 4th Generation Synchrotrons

EIGER2 X CdTe detectors are for scientists who need the highest resolution and frame rates at high energies. You can now detect photons with energies of up to 100 keV with a spatial resolution at the single-pixel level of 75 µm. Thanks to dead-time free readout, you won't lose photons between frames. The second energy discriminating threshold allows you to image your samples in two energy bins or cut higher harmonics to reduce background. Prepare your beamline for the future with a maximum count rate capability of $10^7$ photons/s/pixel.

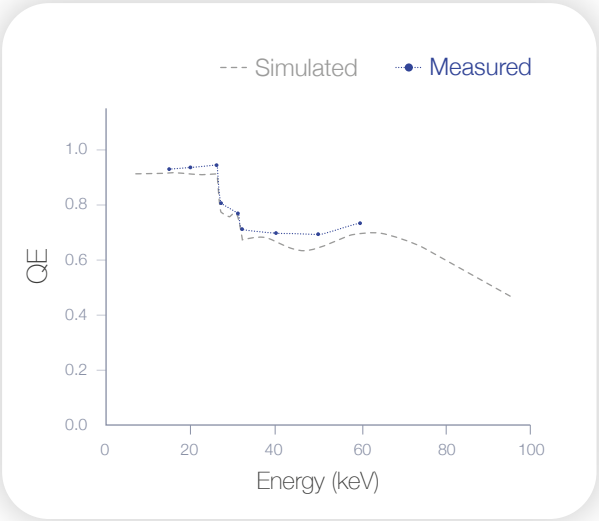
EIGER2 X CdTe detectors combine highest performance with ease of integration and operation.

### Key Advantages

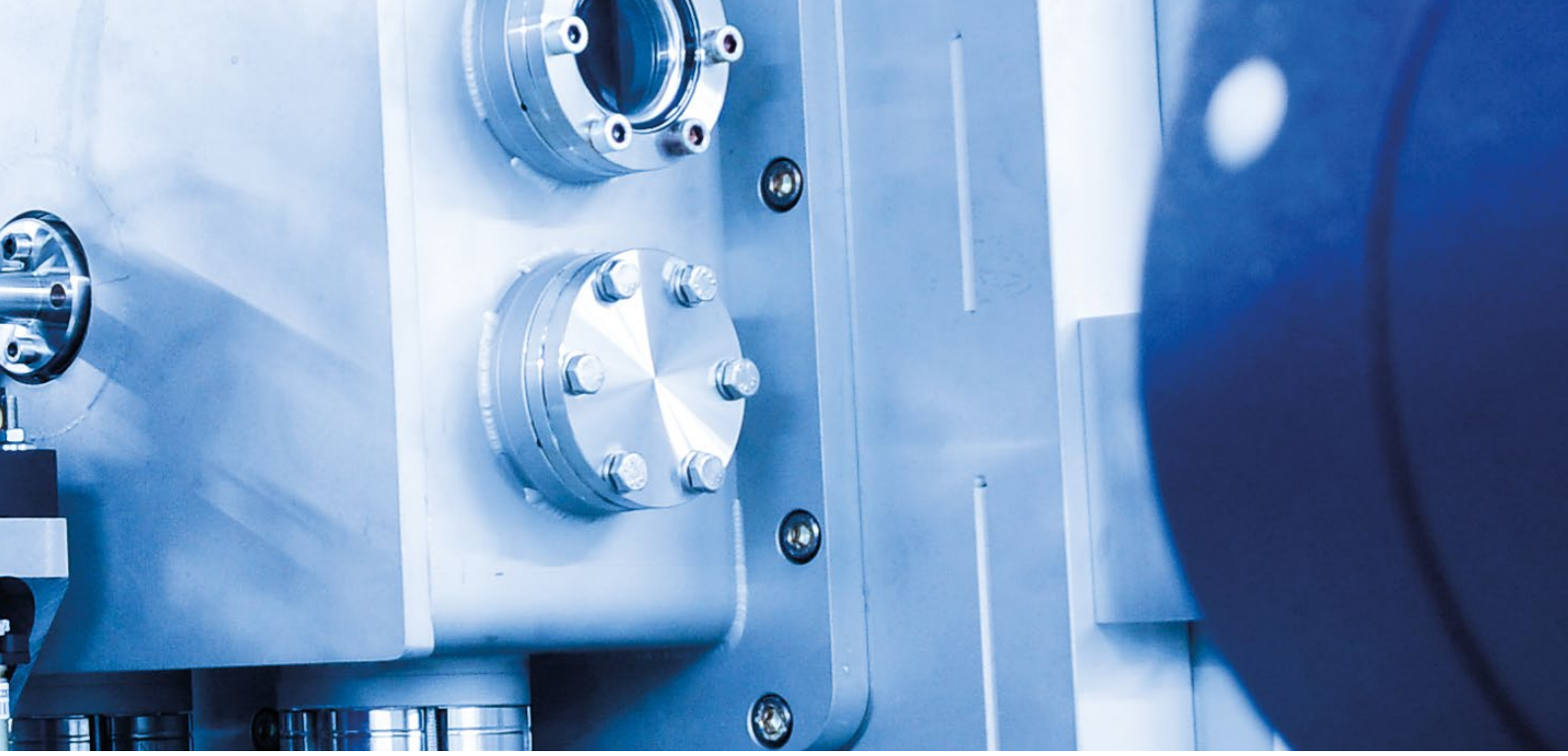
- High quantum efficiency, up to 100 keV
- No image lag or afterglow
- Count rate capability $10^7$ photons/s/pixel
- Two energy discriminating thresholds
- Electronic gating and triggering
- Large active area

### Applications

- X-ray diffraction (single crystal & powder)
- *In-situ* and *in operando* techniques
- Diffraction microscopy and tomography
- Diffuse scattering & pair distribution function




*Measured and simulated quantum efficiency (QE) as a function of X-ray energy.*

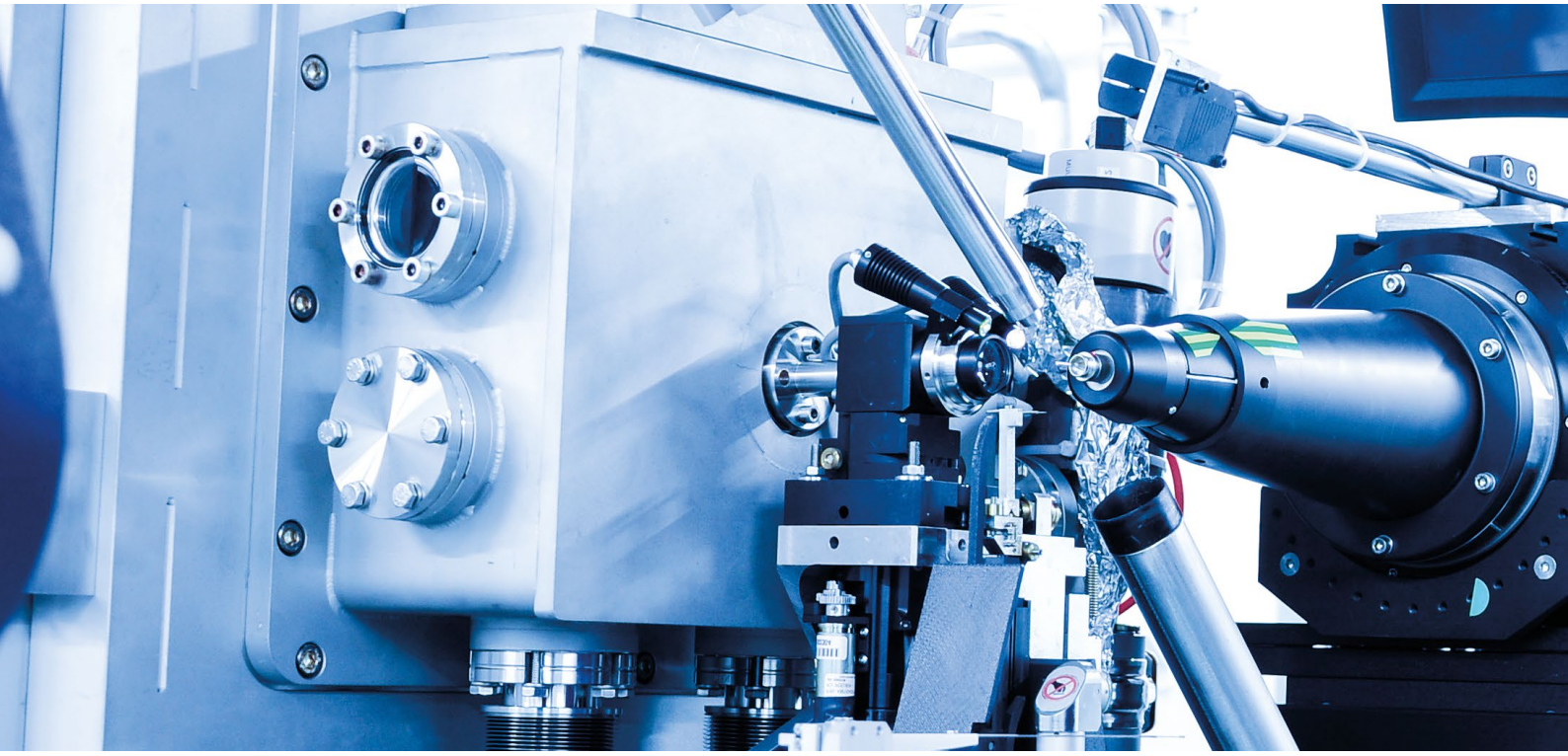


## Technical specifications

| EIGER2 X CdTe | 500K | 1M | 4M | 9M | 16M |
|---|---|---|---|---|---|
| Number of detector modules | 1 | 1 × 2 | 2 × 4 | 3 × 6 | 4 × 8 |
| Sensitive area, width × height [mm²] | 77.2 x 38.6 | 77.2 × 79.9 | 155.2 × 162.5 | 233.2 × 245.2 | 311.2 × 327.8 |
| Pixel size [µm²] | 75 × 75 | | | | |
| Energy-discriminating thresholds | 2 | | | | |
| Count rate capability [photons/s/pixel] | $10^7$ | | | | |
| Point-spread function [pixel] | 1 | | | | |
| CdTe sensor thickness [µm] | 750 | | | | |
| Data format | HDF5 / NeXus | | | | |
| Frame rate [Hz] | 2,000 | 2,000 | 500 | 230 | 130 |
| Dimensions (WHD) [mm³] | 114 x 92 x 242 | 114 × 133 × 240 | 235 × 237 × 372 | 340 × 370 × 500 | 400 × 430 × 500 |
| Weight [kg] | 3.3 | 3.9 | 15 | 41 | 55 |

All specifications are subject to change without notice.





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