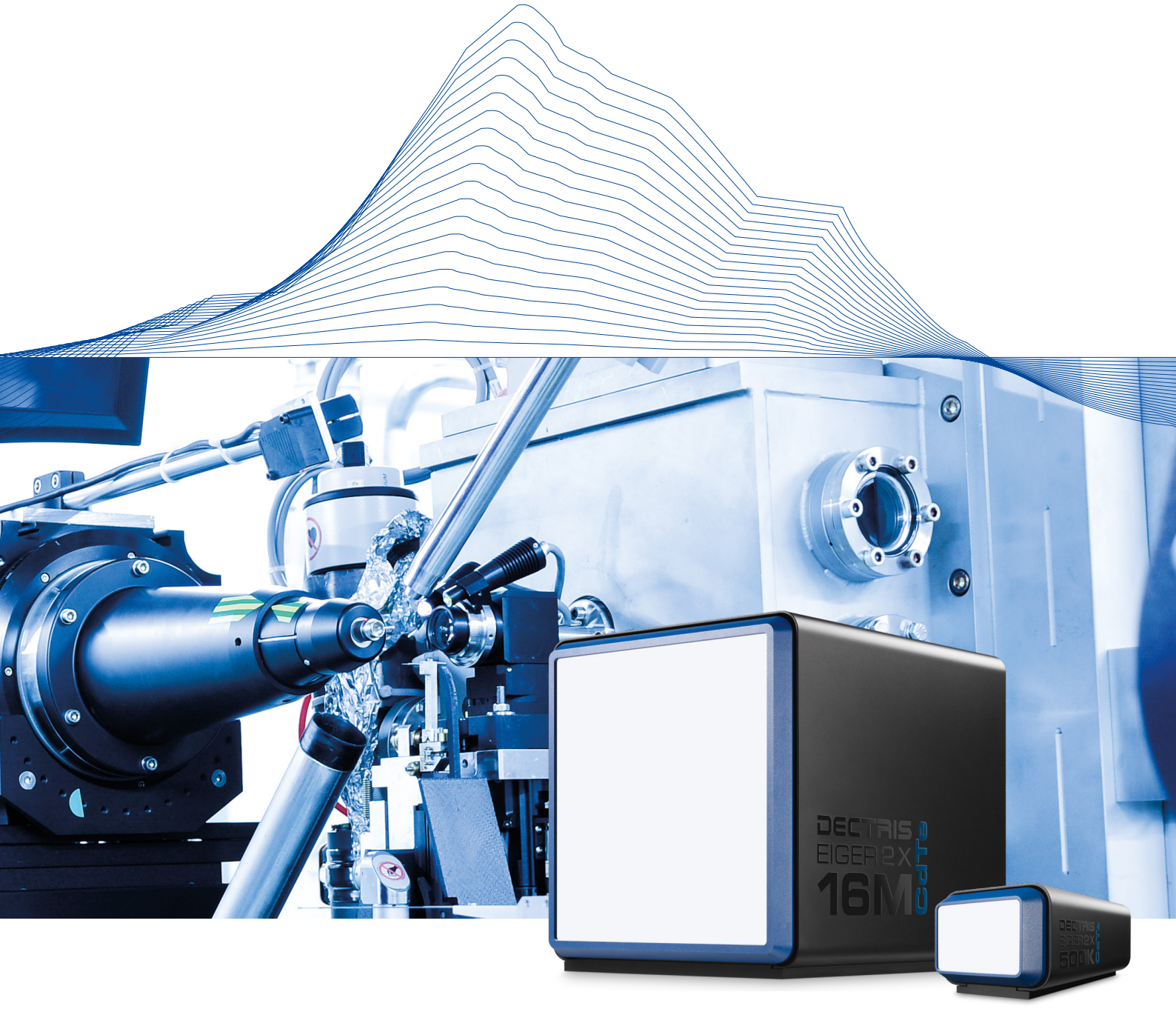
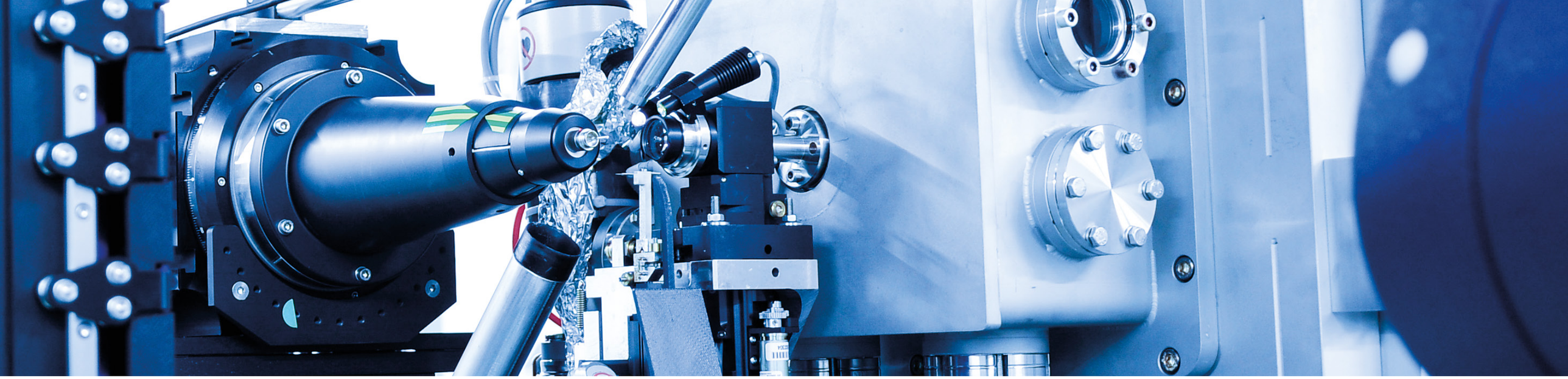
DECTRIS
detecting the future



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.

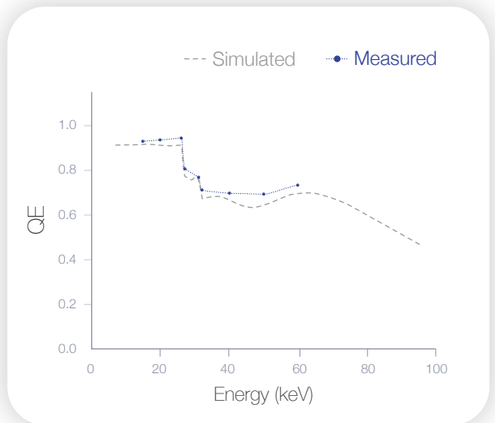
EIGER2 X CdTe detectors combine highest performance with ease of integration and operation.

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



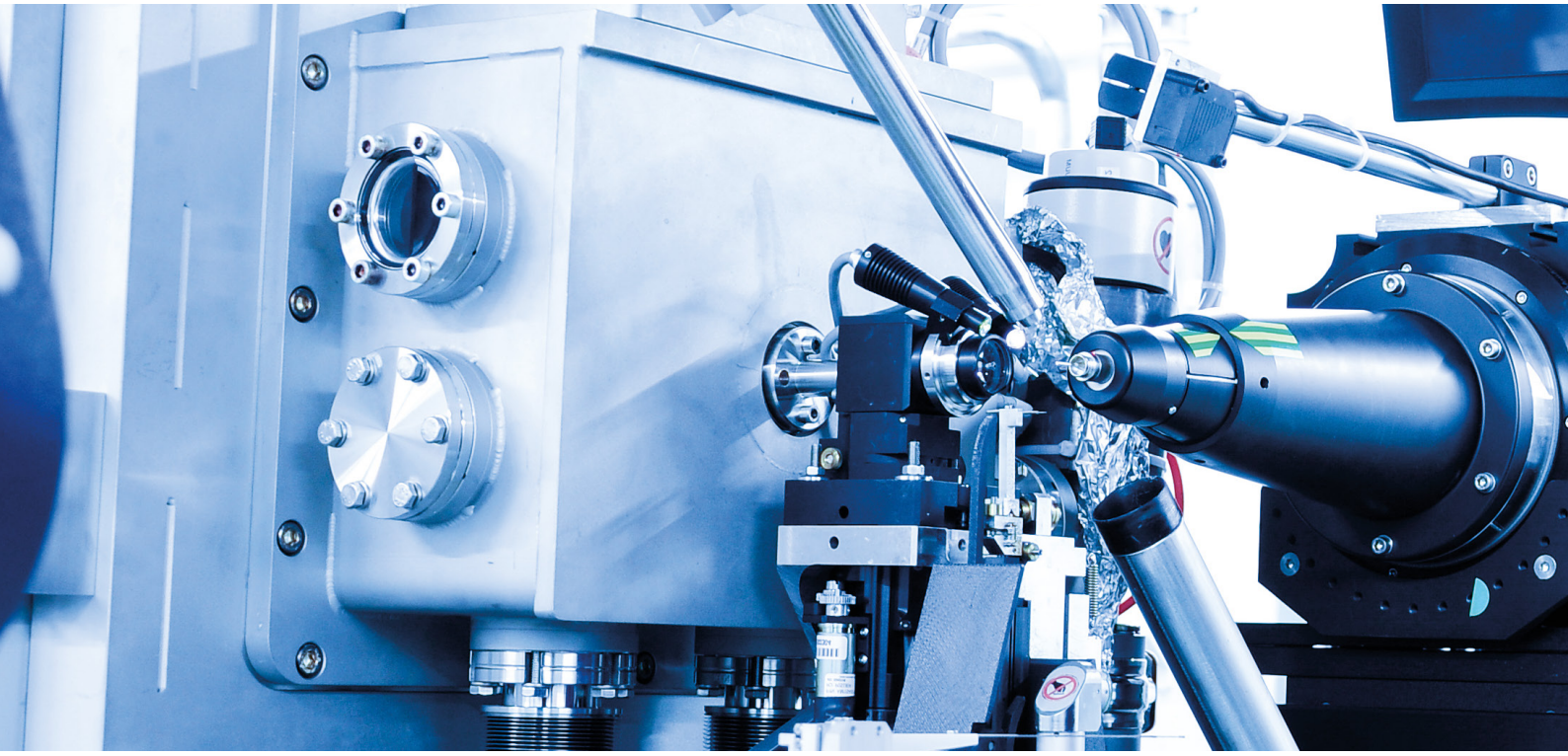
Measured and simulated quantum efficiency (QE) as a function of X-ray energy.

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	4.7	15	41	55

All specifications are subject to change without notice.





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