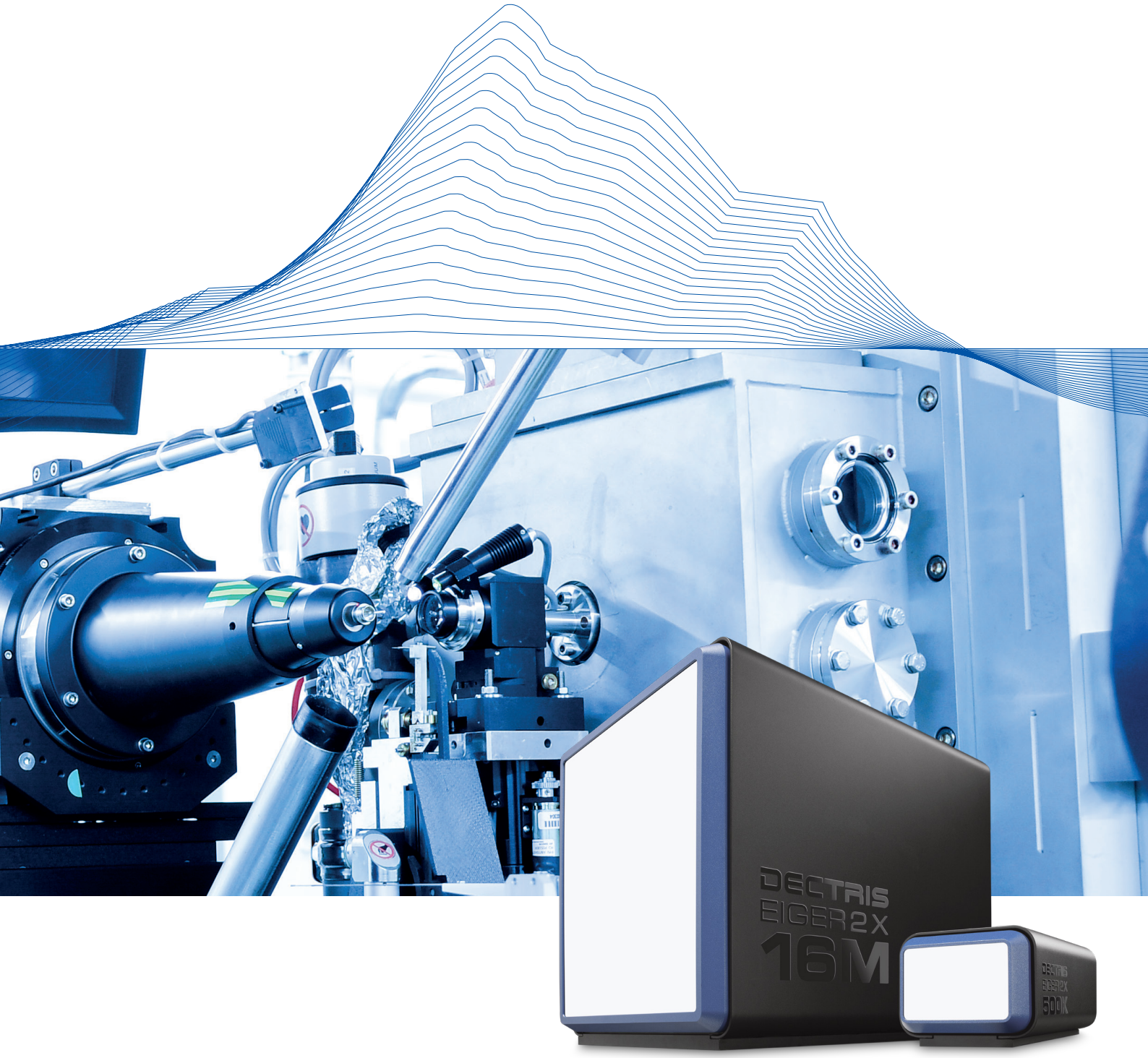
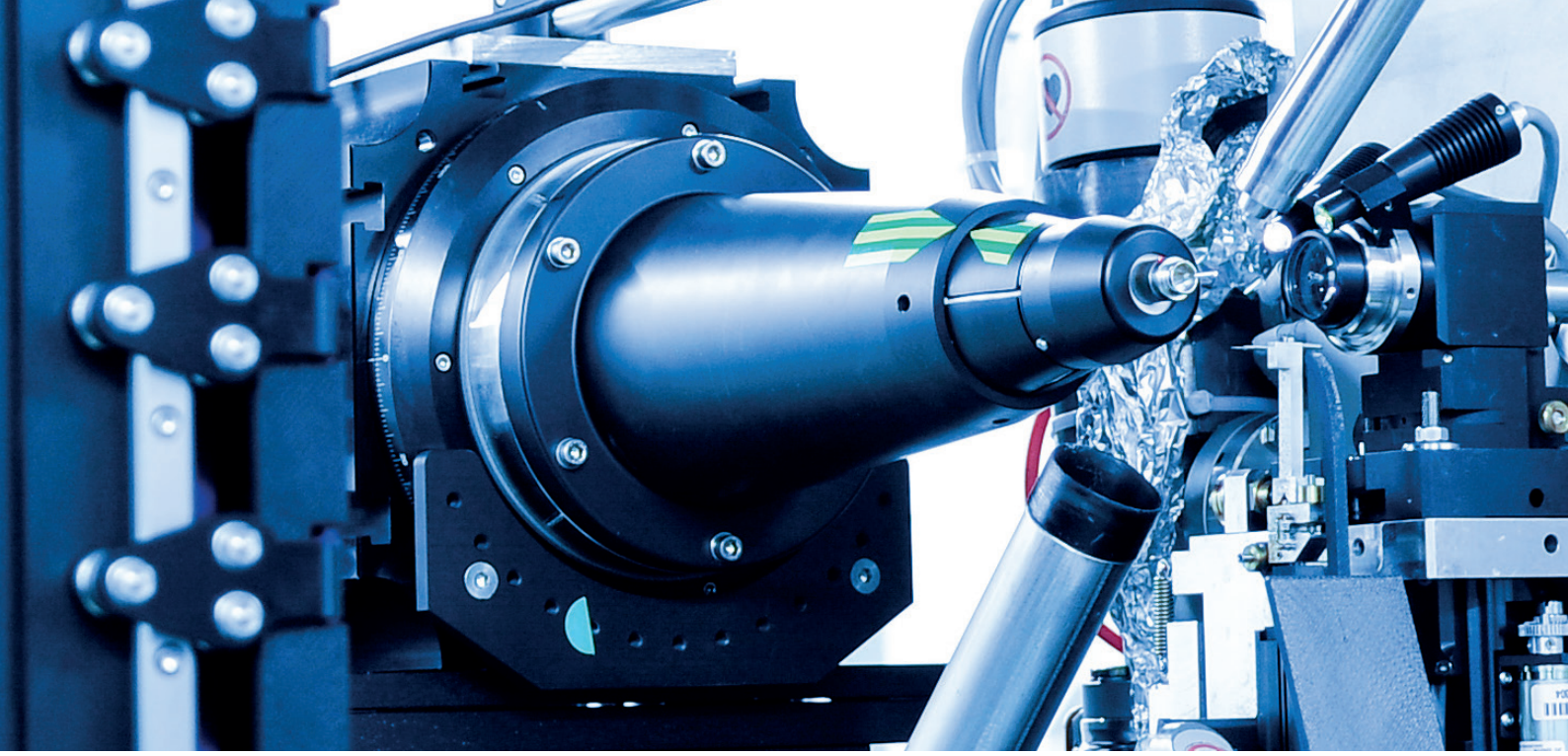
DECTRIS
detecting the future



EIGER2 X

Discover the true potential of your beamline



Latest Technology for 4th Generation Synchrotrons

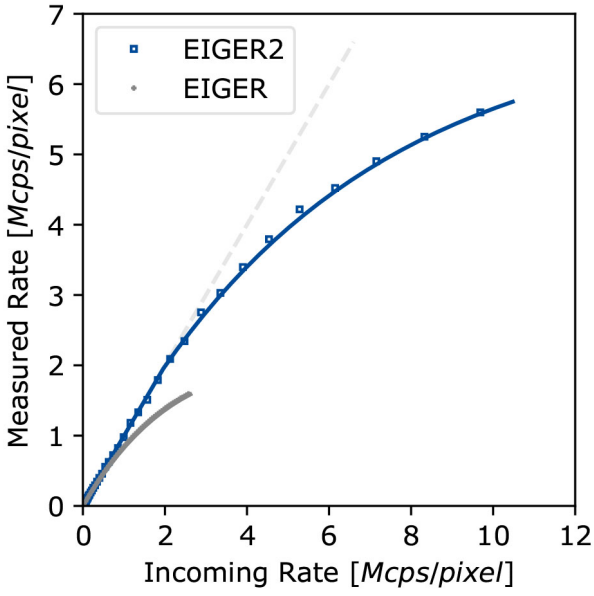
Research is driven by excellence and innovation. Most ambitious projects are realized by modern and powerful tools. Synchrotrons keep getting brighter. To fully exploit the increasing photon fluxes, DECTRIS presents the new EIGER2 detector series. With a count rate capability of 10^7 counts/s/pixel, a second energy discriminating threshold and non-paralyzable counters through DECTRIS retrigger functionality, EIGER2 detectors prepare your beamline for the future.

Key Advantages

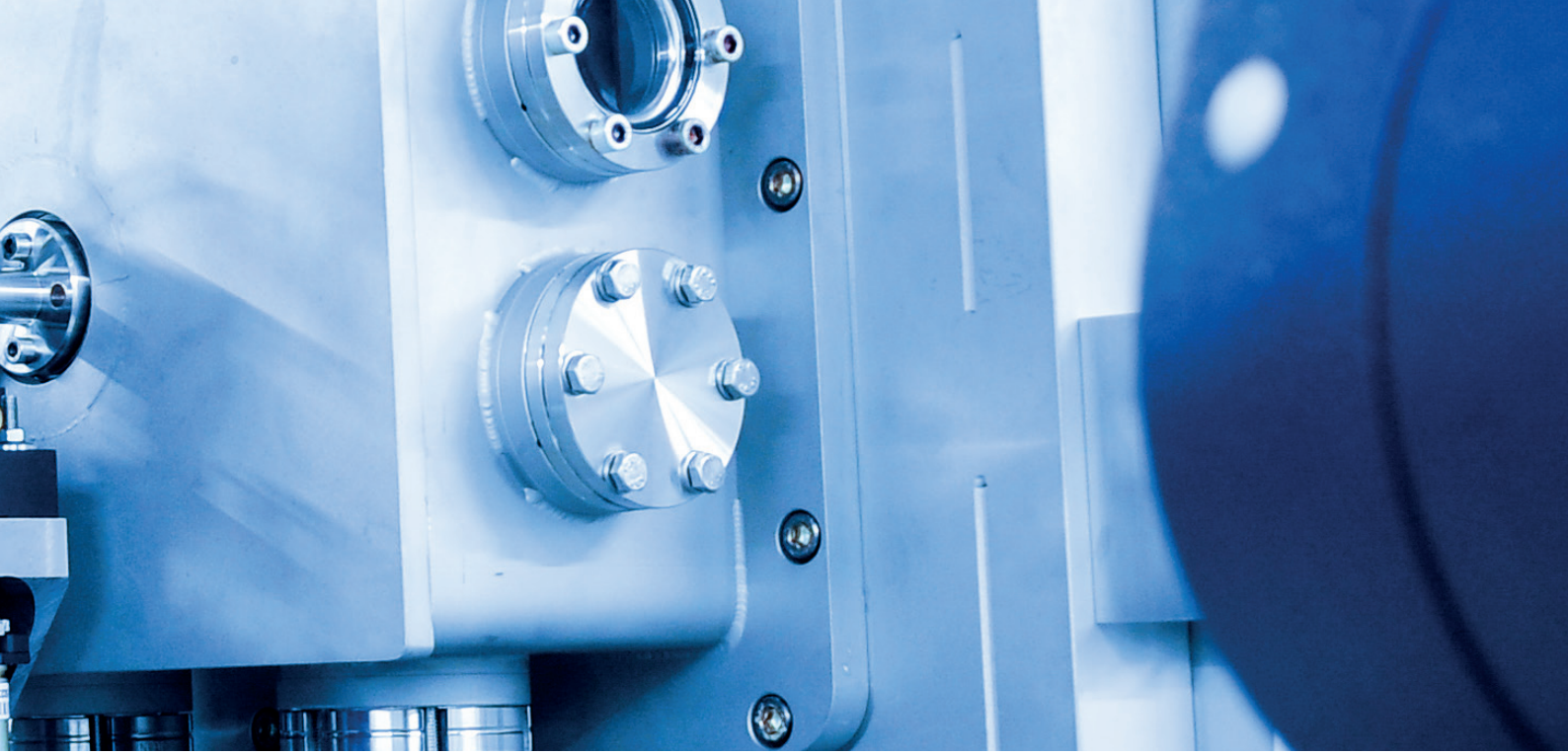
- Hybrid Photon Counting technology
- Count rate capability 10^7 counts/s/pixel
- Two energy discriminating thresholds
- Gateable detection for pump & probe experiments
- Large active area for wide angular coverage

Applications

- Macromolecular crystallography (MX)
- Single crystal diffraction (SCD)
- Small- and Wide-angle X-ray scattering (SAXS/WAXS)
- Powder diffraction (PD)
- Surface diffraction
- Single crystal diffraction (SCD)
- Ptychography
- Time-resolved experiments



Count rate comparison between EIGER and EIGER2 systems at 12 keV photon energy

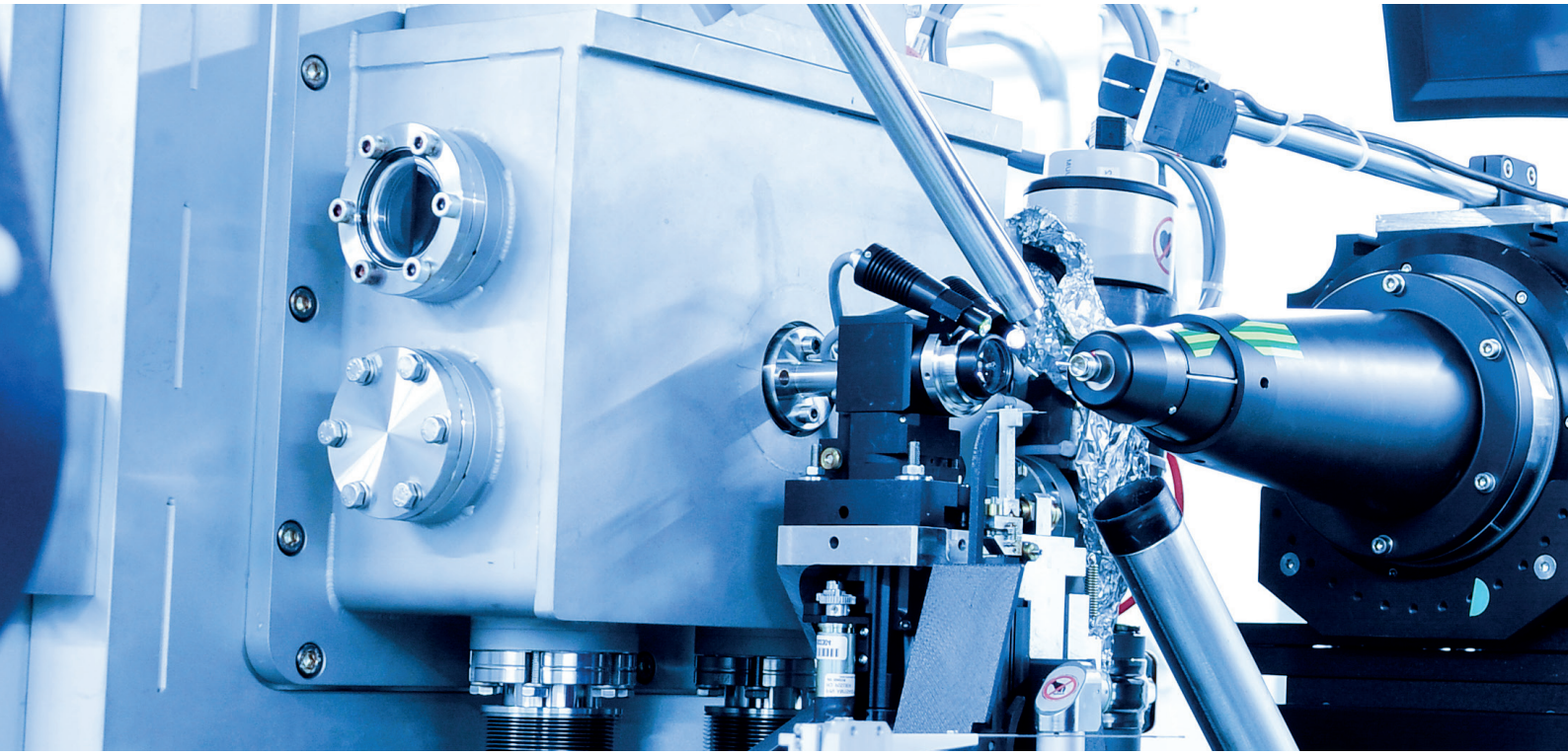


Technical specifications

EIGER2 X	500K	1M	4M	9M	16M
Number of detector modules	1	1 × 2	2 × 4	3 × 6	4 × 8
Sensitive area, width × height [mm²]	77.1 × 38.4	77.1 × 79.65	155.1 × 162.15	233.1 × 244.65	311.1 × 327.15
Pixel size [µm²]			75 × 75		
Total number of pixels	1028 × 512 = 526,336	1028 × 1062 = 1,091,736	2068 × 2162 = 4,471,016	3108 × 3262 = 10,138,296	4148 × 4362 = 18,093,576
Gap width vertical / horizontal [pixel]	- / -	- / 38	12 / 38	12 / 38	12 / 38
Inactive area [%]	0.0	3.6	5.8	6.6	6.9
Energy discriminating thresholds			2		
Count rate capability [counts/s/pixel]			10^7		
Frame rate [Hz] [Hz]	2000	2000	500	230	130
Point-spread function [pixel]			1		
Silicon sensor thickness [µm]			450		
Data format			HDF5 / NeXus		
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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