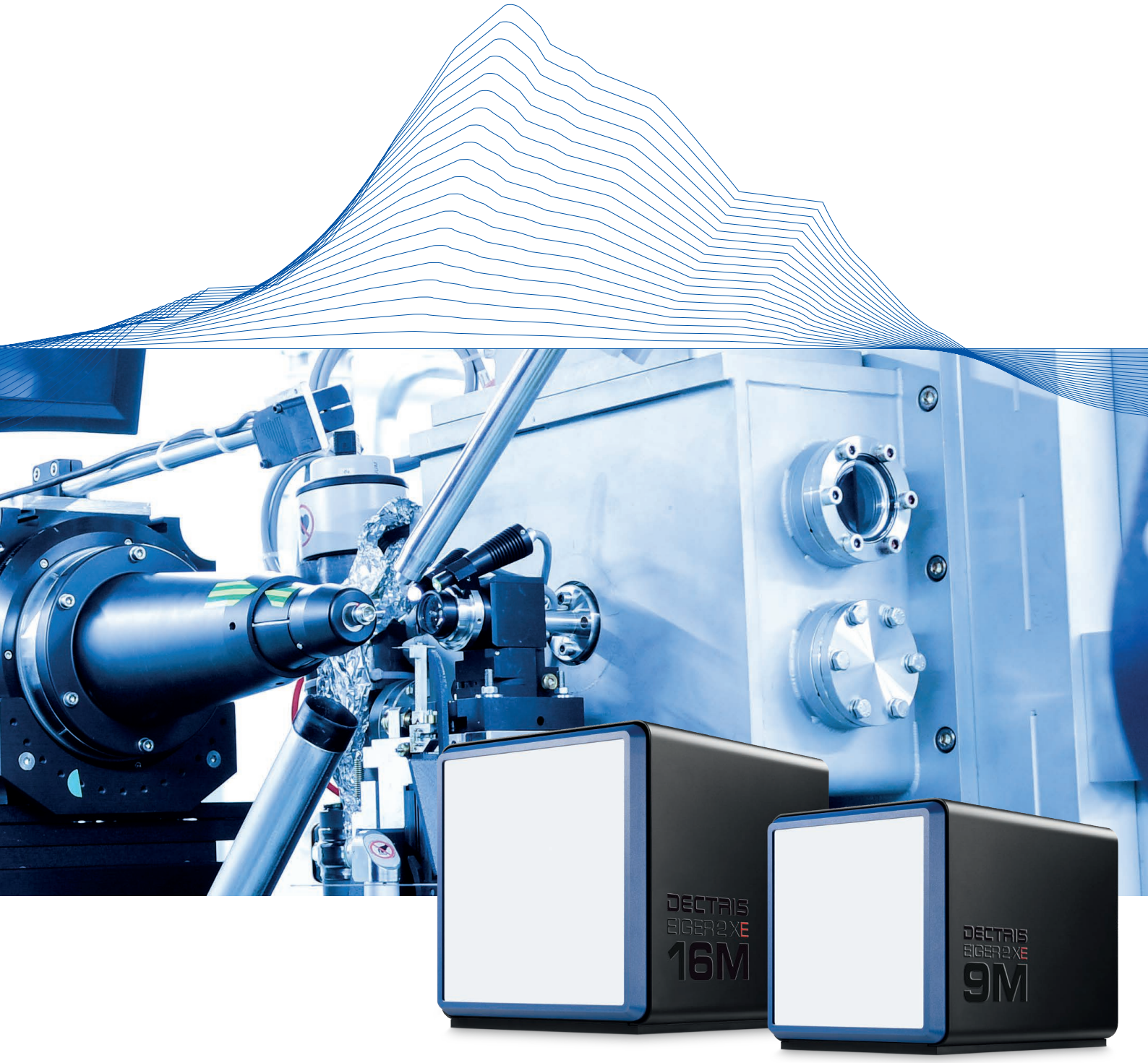
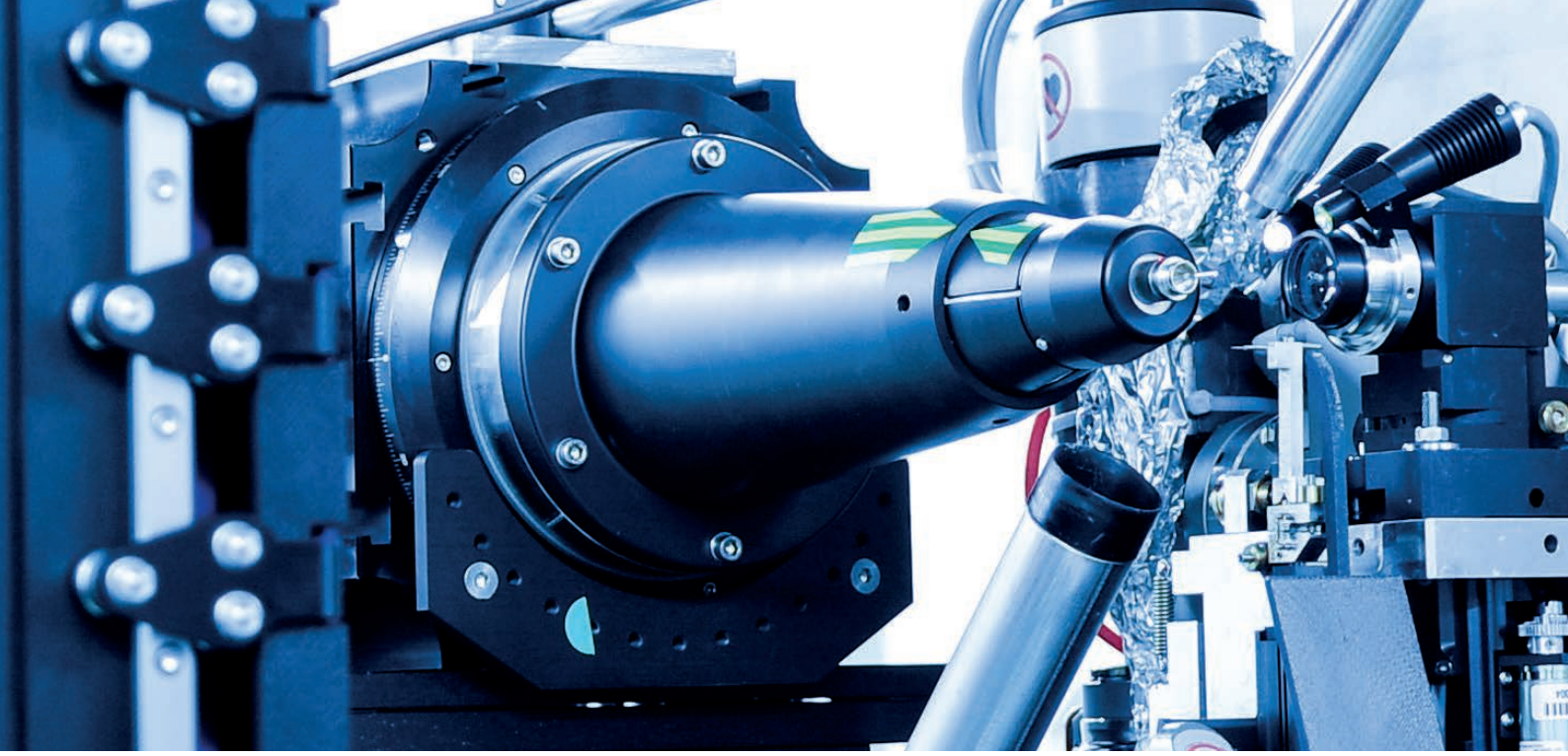
DECTRIS
detecting the future



FAST, FASTER,

EIGER2 XE



Fastest large area detectors for 4th generation synchrotrons

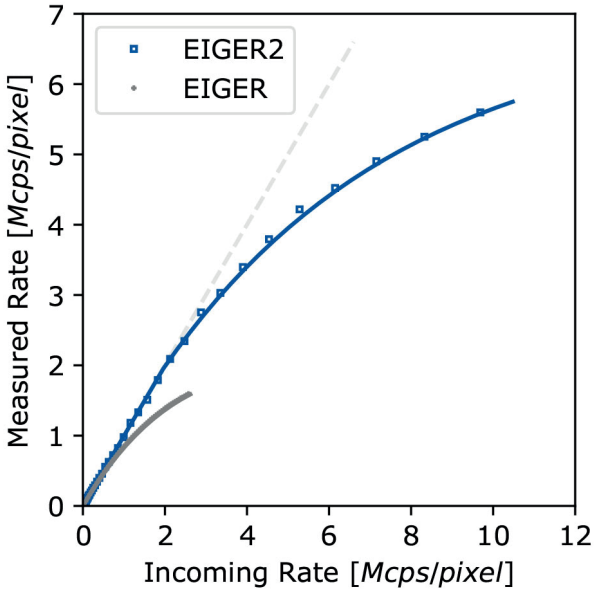
EIGER2 XE detector systems allow endstations to reach new summits in X-ray research. To fully exploit the increasing photon fluxes of the brightest new synchrotron sources, DECTRIS has boosted the EIGER2 X detector series to new extremes. EIGER2 XE 9M and 16M not only provide an unrivalled count rate capability of 10^7 counts/s/pixel and a second energy discriminating threshold but also frame rates above half a kilohertz. Realize your most ambitious projects with an EIGER2 XE detector and prepare your beamline for the future.

Key Advantages

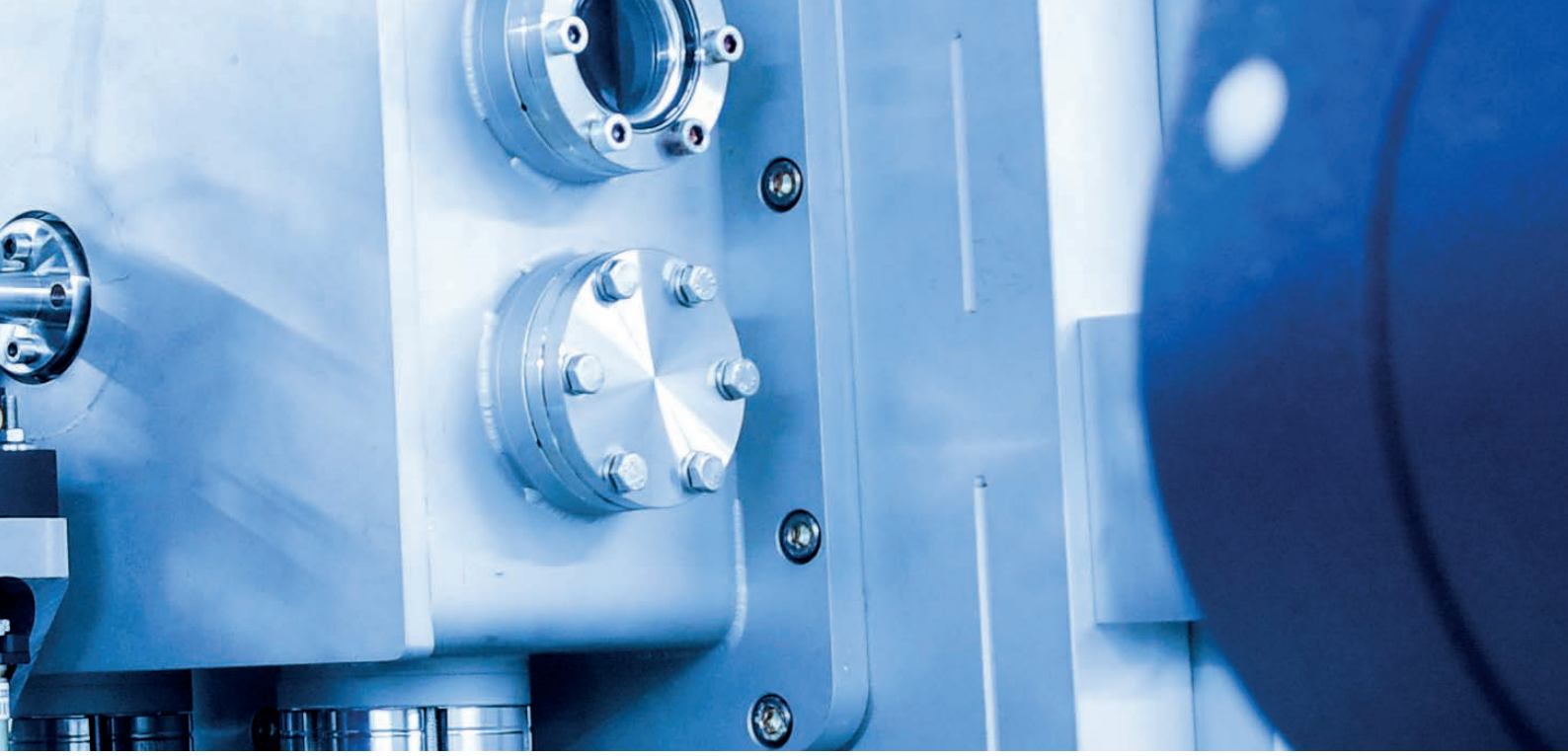
- Hybrid Photon Counting technology
- Count rate capability 10^7 counts/s/pixel
- Two energy discriminating thresholds
- Gateable detection for pump & probe experiments
- Large active area for wide angular coverage

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

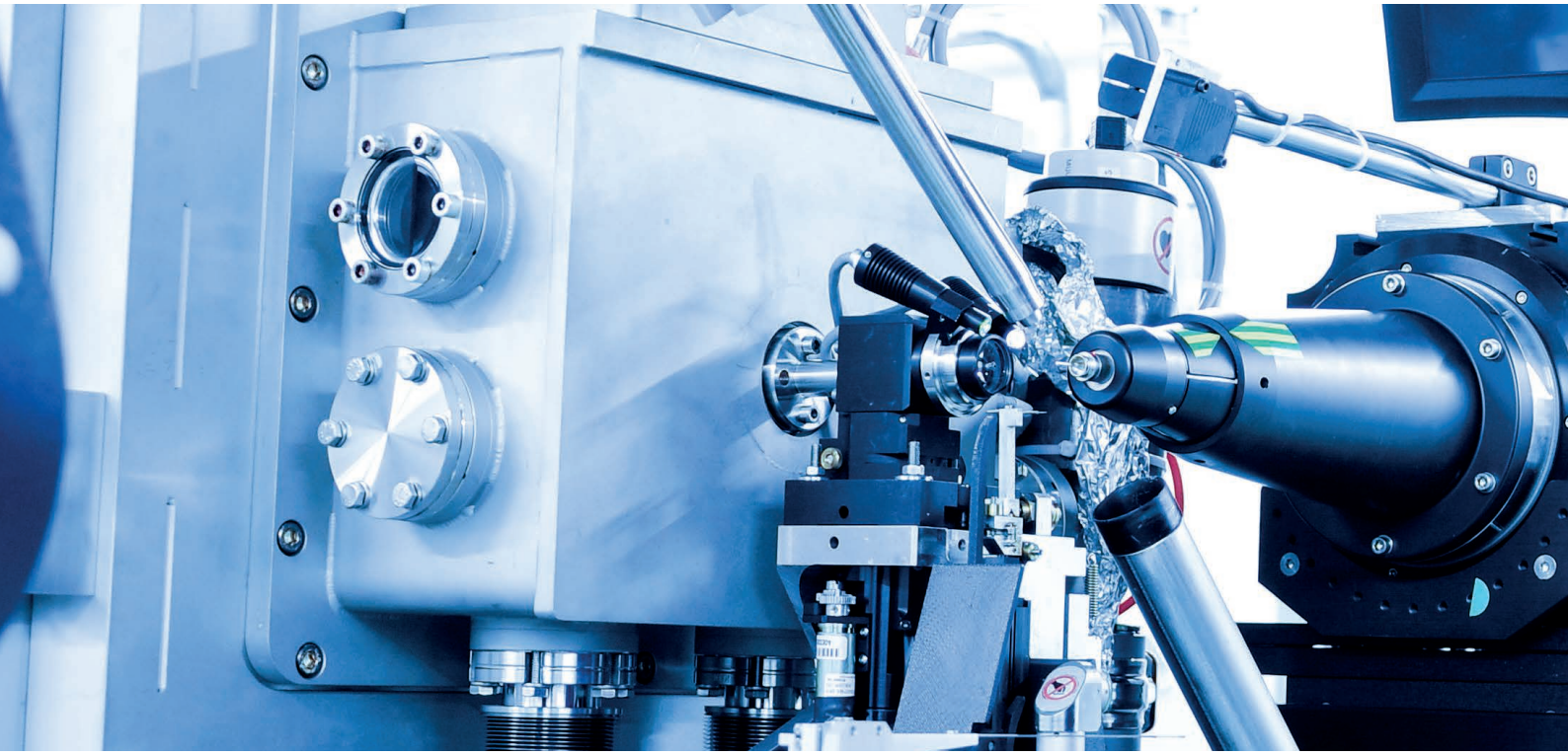


Technical specifications

EIGER2 XE	9M	16M
Number of detector modules	3 x 6	4 x 8
Sensitive area, width × height [mm²]	233.1 × 244.7	311.1 × 327.2
Pixel size [µm²]	75 × 75	
Total number of pixels	3108 × 3262 = 10,138,296	4148 × 4362 = 18,093,576
Gap width vertical / horizontal [pixel]	12 / 38	12 / 38
Energy discriminating thresholds	2	
Count rate capability [counts/s/pixel]	10^7	
Point-spread function [pixel]	1 (FWHM)	
Silicon sensor thickness [µm]	450	
Data format	HDF5 / NeXus	
Maximum frame rate [Hz]	550	550 (20s burst), 400 (continuous)
Energy range [keV]	6.0 - 40	
Customer network interfaces	2 x 1 GbE Base-T, 2 x 10 GbE SFP+, 2 x 100 GbE QSSFP28	
Dimensions (WHD) [mm³]	340 × 370 × 500	400 × 430 × 500
Weight [kg]	41	55

All specifications are subject to change without notice.





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