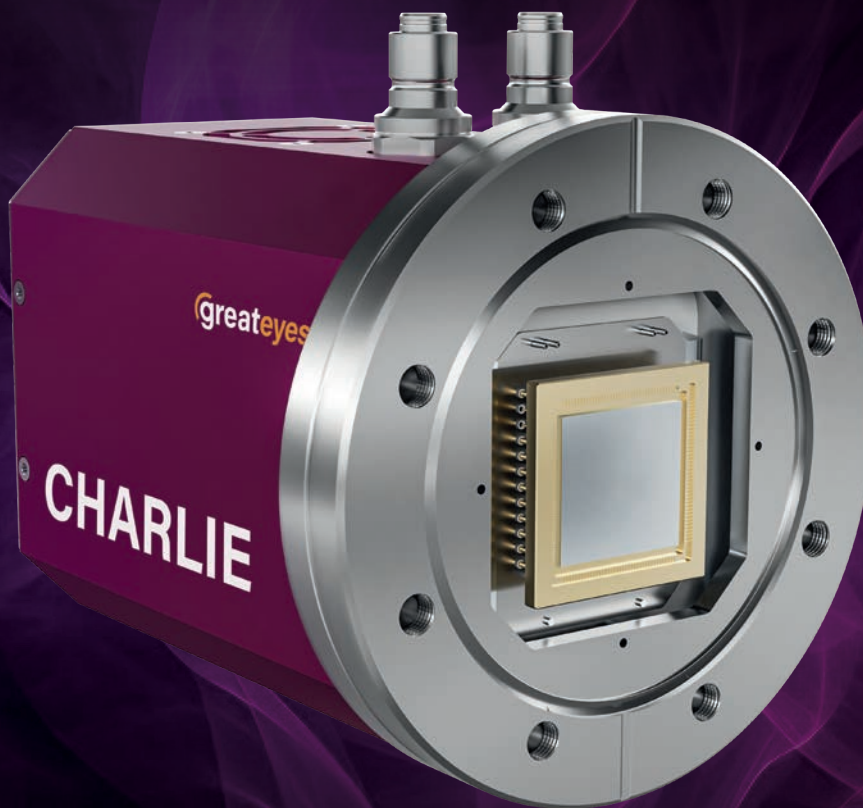


# CHARLIE

Crossing boundaries in X-ray and EUV imaging and spectroscopy, with the lowest noise, in-vacuum back-illuminated sCMOS camera



VUV

EUV

SXR

HXR

**High QE up to 99%**  
with single photon sensitivity

**High frame rates**  
up to 48 fps (full frame)

**Deep cooling to -50°C**  
with very low dark current for better  
detection limits and lowest noise

**GigE & USB 3.0 interface**  
for local or remote network operation

**Compact design**  
with various flange options, including rotatable

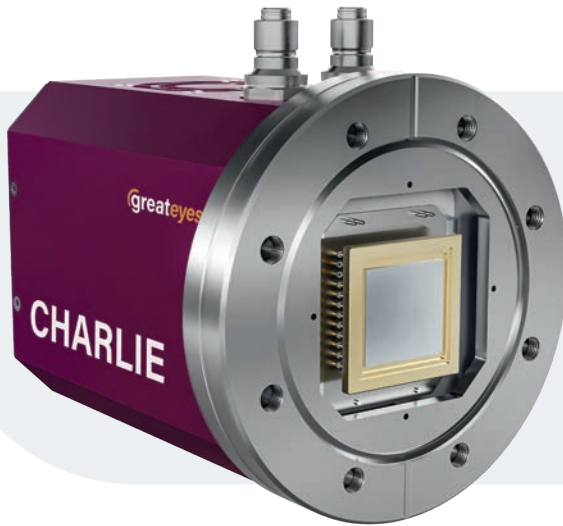
**Flexible software options**  
greateyes Vision software included,  
and various SDKs and drivers available

# CHARLIE



## Crossing boundaries in X-ray and EUV imaging and spectroscopy

CHARLIE refers to Checkpoint Charlie, the most famous Berlin border crossing during the division of Germany.



### CHARLIE 2k2k 11

**Sensor cooling:** -50°C

**Usable pixels:** 2048 x 2048

**Pixel size:** 11 x 11 µm

**Full well capacity:** 91 ke<sup>-</sup> typ. (HDR mode)

Straight out of Berlin comes **CHARLIE**, greateyes' **new back-illuminated sCMOS camera** that combines cutting-edge technology with innovative functionality, to offer unprecedented opportunities for the measurements of tomorrow.

Built on our decades of experience in ultra high vacuum (UHV), **CHARLIE** is specially designed for a broad range of applications in the EUV, VUV and X-ray range.

With low-noise electronics and deep cooling, **CHARLIE** delivers peak Quantum Efficiency, high full well capacity, high dynamic range, and 12-bit SDR and 16-bit HDR modes.

### TYPICAL APPLICATIONS

X-ray Spectroscopy

EUV Lithography

High Harmonic Generation Detection

FEL High Rep Rate X-ray Imaging

Coherent Diffraction Imaging

SAXS and RIXS

NEXAFS Spectroscopy

X-ray Ptychography



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