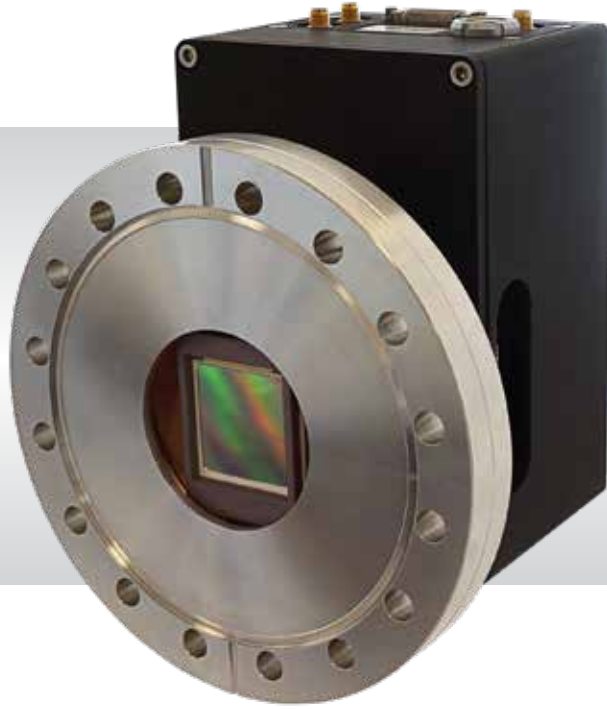


Eagle XO

Open Front, Direct Detection CCD

2048 x 2048, 2048 x 512 and 1024 x 1024 formats • 75kHz and 2MHz •

High resolution soft X-ray scientific imaging



Key Features and Benefits

Ultimate Sensitivity Performance

- **Open front end**
CF152 (6") flange for direct interfacing to vacuum chambers
- **Deep cooled using Thermoelectric cooler (TEC)**
Minimize dark current and enable long exposure
- **Back Illuminated with no coating**
Optimizes sensitivity and large field of view imaging
- **Ultra high intrascene dynamic range - 93dB**

Resolution	2048 x 2048 2048 x 512 1024 x 1024
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Dark Current	0.0004 e/p/s
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Full Well Capacity	100Ke-
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Readout Noise	2.3e- RMS
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Camera Link	16bit
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Specification for Eagle XO

Sensor ¹	E2V 4240 Back Illuminated, AIMO	E2V 4210 Back Illuminated, AIMO	E2V 4710 Back Illuminated, AIMO
Active Pixel	2048 × 2048	2048 × 512	1024 × 1024
Pixel Size	13.5µm × 13.5µm		13µm × 13µm
Active Area	27.6mm × 27.6mm	27.6mm × 6.9mm	13.3mm × 13.3mm
Binning	Programmable, up to 64×64 pixels		
Full Well Capacity	100ke-		
Shift Register Well Depth	150ke-		
Non-Linearity	< 1%		
Readout Noise (RMS)	2.3e- @ 75kHz pixel readout rate 9.0e- @ 2MHz pixel readout rate		
Binned Read Noise (RMS)	16×16 binning: < 5.0e- @75kHz pixel readout rate		
Peak Quantum Efficiency (QE)	> 90%		
Spectral Response	1.2eV to 20KeV		
Dark Current (e/p/s)	<0.0004 -75°C		
Cooling Method	Air / Liquid		
Cooling	Active: -75°C air cooled / -80°C water cooled, ΔT > 100°C		
Flange ²	CF152 (6")		
Synchronization	Trigger IN and OUT – TTL compatible		
Digital Output Format	16-bit Camera Link (base)		
Power Supply	12V DC ±10%		
Total Power Consumption	TEC OFF < 9W TEC ON < 70W		
Operating Temperature Range	-20°C to +55°C		
Storage Temperature Range	-40°C to +70°C		
Dimensions	155.08mm x 140.89mm x 110.00mm		
Weight (excluding lens)	5.0kg [11lb]		

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Ordering Information

Camera

Eagle XO Open Front CCD 4MP	EA4240XO-BN-CL
Eagle XO Open Front CCD 1MP	EA4210XO-BN-CL
Eagle XO Open Front CCD 1MP	EA4710XO-BN-CL
Eagle XO Power Supply Unit	EAXV-PSU
Eagle XO Power Brick	EA-BRK-85W

Optional Accessories

Mini PC with Xcap STD and frame grabber	RPL-PC-EL1
EPIX® EB1 base CL card	RPL-EPIX-EB1
EPIX® XCAP STD software	RPL-XCAP-STD
Camera Link Cable, 2m ²	RPL-CL-CBL-2M
Thermoelectric Water Chiller Unit	RPL-CHILLER
Water tubing for Eagle (3M) M-M	RPL-WTUBE-EAGLE

Note 1: A range of coatings are available

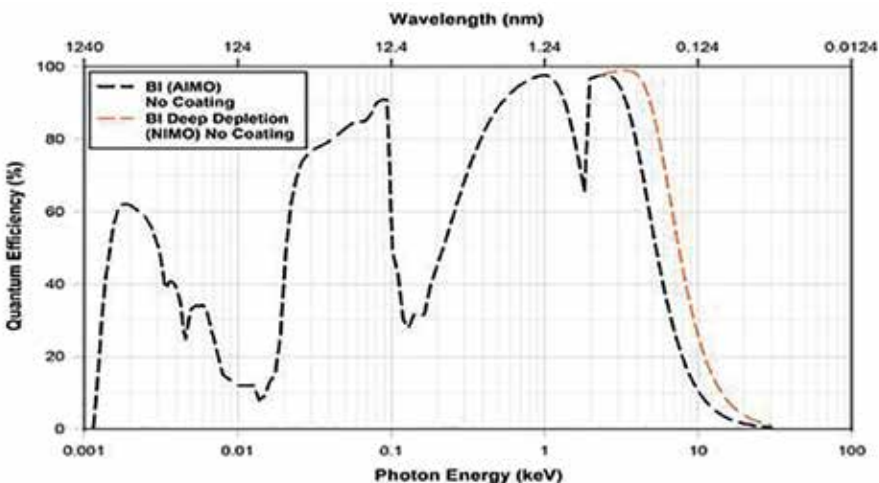
Note 2: Other flange options available such as ISO-K-DN100-

Note 3: Longer CL cable available

Demo is available on request.
Pricing AOR subject to volumes.

Detailed technical drawings
can be downloaded at
www.raptorphotonics.com

Quantum Efficiency



Applications

- X-Ray Imaging
- X-Ray Diffraction (XRD) and X-Ray Fluorescence (XRF)
- X-Ray Plasma Imaging and Diagnostics
- Soft X-Ray Microscopy
- EUV X-Ray Spectroscopy
- X-Ray source characterization
- X-Ray Phase Contrast Imaging
- X-Ray Tomography
- VUV/EUV/XUV Imaging and Lithography Crystallography

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