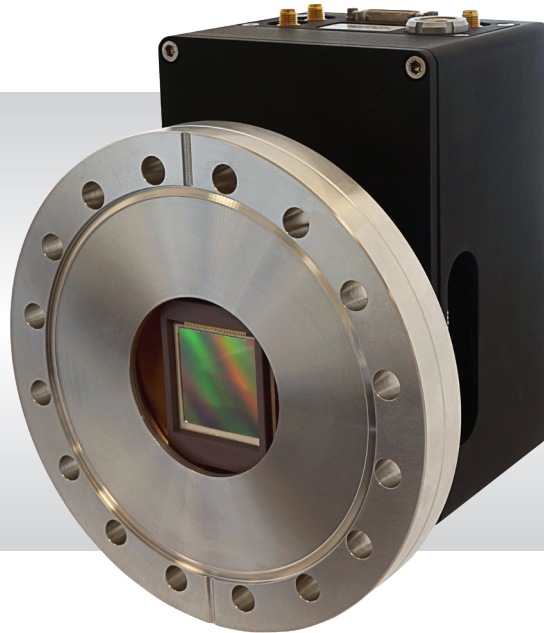


Falcon III – XO

Open Front • Digital Monochrome Scientific Frame Transfer EMCCD • 1024 x 1024 • 10µm x 10µm pixels • Cooled to -70°C • 1MP Scientific • 34fps in full frame •



Key Features and Benefits

Fastest Scientific X-ray camera on the market

- **Open front end**
CF152 (6") flange for direct interfacing to vacuum chambers
- **Back Illuminated with no coating**
Optimises sensitivity and large field of view imaging from 1.2keV to 20keV
- **Fast frame in full resolution: 34 fps**
Ideal for full frame imaging with fast repetition lasers
- **Deep cooled to -70°C**
For minimal background events

Resolution	1024 x 1024
Pixel Size	10µm x 10µm
Readout Noise	<1e-
Frame Rate	34fps
Camera Link	16bit

PRELIMINARY

Ordering Information

Camera

Falcon III -XO EMCCD 1MP	FA351XO-BN-CL
Power Supply Unit	FA-PSU-III

Optional Accessories

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

Note 1: The CCD sensor must be operated in a non condensing environment, otherwise permanent damage may occur. Vacuum pressures $\leq 10^{-5}$ mbar are required to achieve maximum cooling performance.

Note 2: Other flange options available.

Note 3: Longer CL cable available.

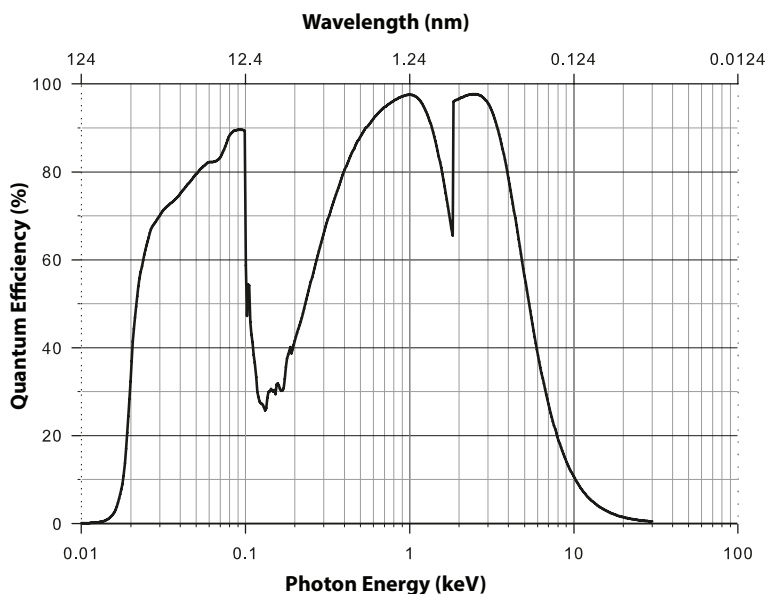
Demo is available on request.
Pricing AOR subject to volumes.

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

Sensor Type	1" Back Thinned Frame Transfer EMCCD
Active Pixel	1024 x 1024
Pixel Size	10 μ m x 10 μ m
Active Area	10.2mm x 10.2mm
Full Well Capacity	35ke-
Shift Register Well Depth	200ke-
Non-Linearity	<1%
Readout Noise (RMS)	EM Gain ON: <1 electrons EM Gain OFF: <50 electrons
Full Resolution Frame Rate	34fps
Exposure Time	1ms to >1hr
Dark Current (e/p/s)	0.001 @ -70°C
Digital Output Format	16 bit Camera Link (base configuration)
Peak Quantum Efficiency	>90%
Spectral Response	1.2eV to 20KeV
Cooling ¹	-70°C
Binning	1x1 up to 32x32
Synchronisation	Trigger IN and OUT - TTL compatible
Power Supply	12V DC \pm 0.5V
Total power consumption	<100W
Operating case temperature	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H)	129mm x 112mm x 94mm
Weight	<2.5Kg
Flange ²	CF152 (6")

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Quantum Efficiency



Applications

- X-ray imaging and fluorescence (XRF)
- X-Ray Diffraction (XRD)
- X-ray microscopy
- RIXS
- VUV/EUV/XUV Spectroscopy
- Thin films and nanofibers
- Material Composition and Structure
- X-ray plasma diagnostics
- Holography and lithography

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