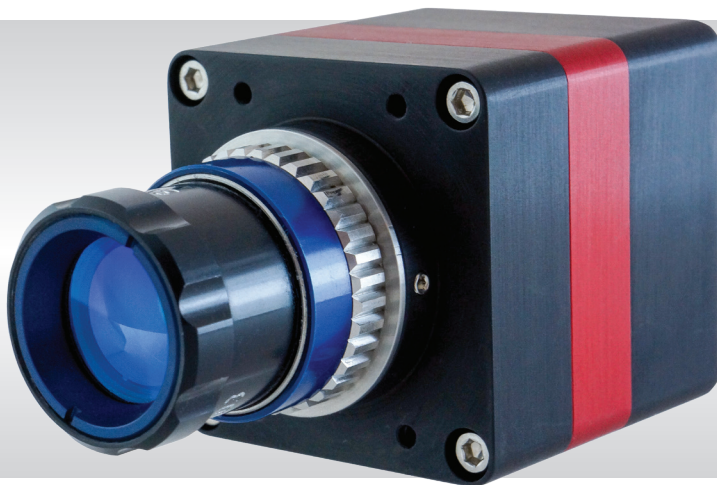


Owl 640 II

Low noise, digital VIS-SWIR camera

640 x 512 • 15µm x 15µm Pixel Pitch • Frame rate up to 120 Hz •



Key Features and Benefits

The best performing VIS-SWIR camera in the World!

- **VIS-SWIR technology**
Compatible with VIS-SWIR illuminators, markers & pointers
- **15µm x 15µm pixel pitch**
Enables highest resolution VIS-SWIR image
- **Ultra high intrascene dynamic range**
Enables simultaneous capture of bright & dark portions of a scene
- **On-board Automated Gain Control (AGC)**
Enables clear video in all light conditions
- **Ultra compact, Low power**
Ideal for hand-held, mobile or airborne systems

Resolution	640 x 512
Frame rate	Up to 120Hz
Readout noise	36 electrons
Wavelength Range	VIS-SWIR

Specification for Owl 640 II

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.68mm
Spectral response ¹	0.4µm to 1.7µm
Readout Noise (RMS) ² LG = Low Gain HG = High Gain	LG: <190e- (174e- typical) HG: <50e- (36e- typical)
Peak Quantum Efficiency	>90% @1.3µm
Full Well Capacity	LG: 650ke- HG: 10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<28,000 @ 15°C
Digital Output Format	14 bit Camera Link (Base Configuration)
Exposure time ³	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	Up to 120Hz
Optical Interface	C mount or M42
Dynamic Range	LG: 71dB HG: 49dB
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±0.5V
TE Cooling	Active
Image Correction	3 point NUC (offset, Gain & Dark Current) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non Uniformity Correction, Gamma, Pk/Av, TEC, ALC ROI
Camera Power Consumption ⁴	<4W with TEC ON, NUC ON
Operating Case Temperature ⁵	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H) ⁶	69.4mm x 50.00mm x 50.00mm
Weight	282g

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.

Ordering Information

Camera

Owl 640 II Digital Camera	OW1.7-VS-CL-640-II
Power Supply Cable	RPL-HR4-K

Optional Accessories

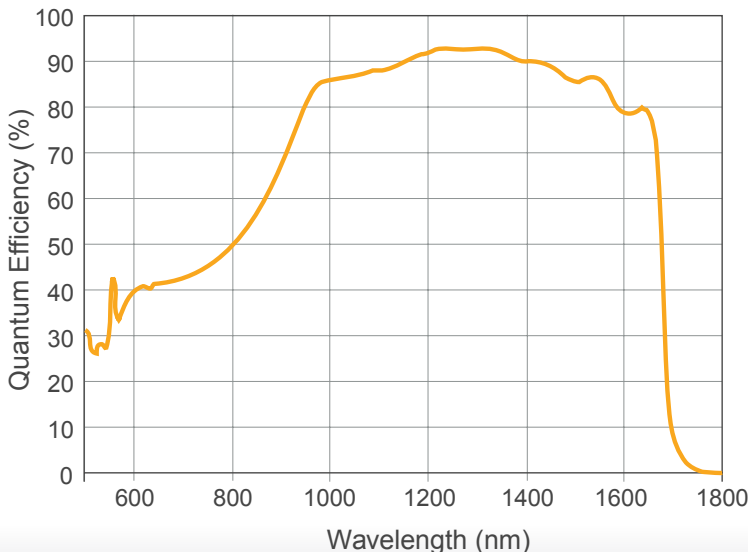
Mini PC with XCAP Std and frame grabber	RPL-PC-EL1
EPIX® EB1 Frame Grabber	RPL-EPIX-EB1
EPIX® XCAP Std software	RPL-XCAP-STD
Camera Link Cable (2m) ⁷	RPL-MCL-CBL-2M
Optical Lenses ⁸	RPL-xx-xxxx

- Note 1: Optional filters available: Low, High or bandpass.
- Note 2: Typical readout noise is calculated from an average of the last 20 cameras shipped.
- Note 3: In practice, the maximum exposure time will be dark current limited.
- Note 4: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.
- Note 5: Extended operating temperature range on request.
- Note 6: Dimensions include all connector parts on the camera interface.
- Note 7: Longer Camera Link cable available.
- Note 8: Please consult us to check our range of lenses.

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

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

Quantum Efficiency



*Data supplied by sensor manufacturer

Applications

Surveillance

- 860, 1064 & 1550nm laser line detection
- Active Imaging
- Airborne Payload
- Hand Held Systems
- Imaging through Fog
- Range Finding
- Vision enhancement

Scientific

- Astronomy
- Beam Profiling
- Hyperspectral Imaging
- Semiconductor Inspection
- Solar Cell Inspection
- Thermography



Willowbank Business Park
Larne, Co Antrim
BT40 2SF,
Northern Ireland

Raptor Photonics Ltd. (UK)
T: +44(0)2828 270 141
E: sales@raptorphotonics.com
www.raptorphotonics.com

Raptor Photonics Inc. (USA)
T: +1 (877) 230-4836
E: sales@raptorphotonics.com
www.raptorphotonics.com

