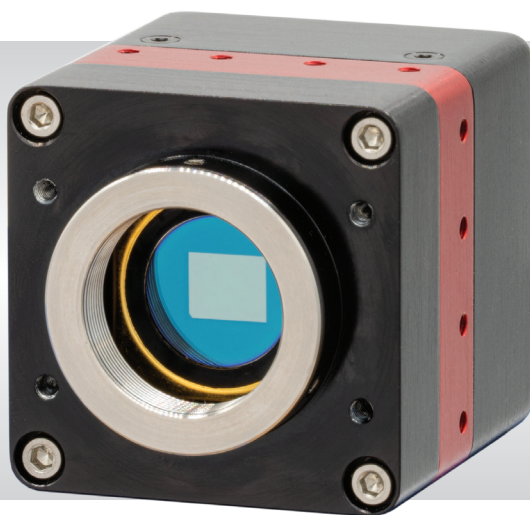




Owl 640 II

Low noise, digital VIS-SWIR camera

640 x 512 • 15 μ m x 15 μ m 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

- **15 μ m x 15 μ m 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	0.6µm 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) ³	<28,000 @ 15°C
Digital Output Format	14 bit Camera Link (Base Configuration / SDR)
Exposure time ⁴	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	Up to 120Hz
Optical Interface ⁵	C mount
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 ⁶	<8W with TEC ON, NUC ON
Operating Case Temperature ⁷	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H) ⁸	69.4mm x 50.00mm x 50.00mm
Weight	282g

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Ordering Information

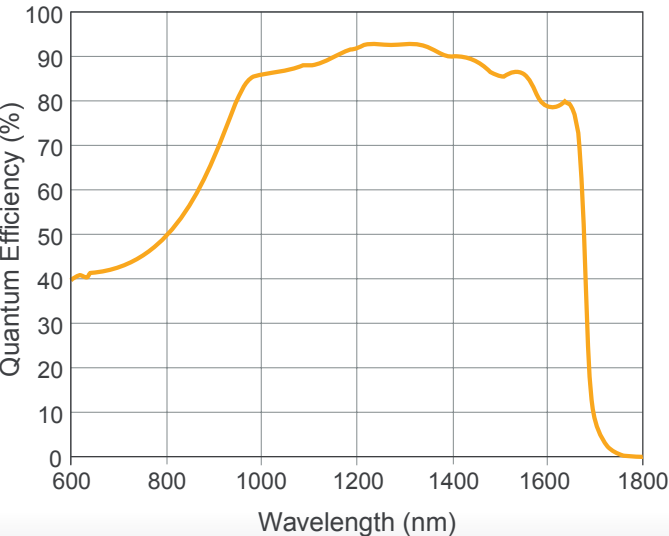
Camera	
Owl 640 II Digital Camera	OW1.7-VS-CL-640-II
Power Supply Cable	RPL-HR4-K

Optional Accessories	
Mini PC with XCAP STD and frame grabber	RPL-PC-mf2280
Thunderbolt frame grabber	RPL-mf2280
EPIX® EB1 Frame Grabber	RPL-EPIX-EB1
EPIX® XCAP Std software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m) ⁹	RPL-MCL-CBL-2M
Optical Lenses ¹⁰	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: Dark current provided for information and is not official specification.	
Note 4: In practice, the maximum exposure time will be dark current limited.	
Note 5: Other mounts on request.	
Note 6: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.	
Note 7: Extended operating temperature range on request.	
Note 8: Dimensions include all connector parts on the camera interface.	
Note 9: Longer Camera Link cable available.	
Note 10: 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