

Owl 640 VIS-SWIR

High resolution, low noise, digital VIS-SWIR camera,
640 x 512 • Frame rate up to 120 Hz • VIS-SWIR technology •



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 ⁶	36 electrons
Wavelength Range	VIS-SWIR

Specification for Owl 640 VIS-SWIR

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) LG = Low Gain HG = High Gain	LG: <190 electrons (174 electrons typical) HG: <50 electrons (36 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
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	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, ROI
Camera Power Consumption ²	<3.5W with TEC OFF, NUC ON <5W with TEC ON, NUC ON (ambient of 25°C)
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions	90.93mm x 50.00mm x 50.00mm
Weight	282g

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Ordering Information

Camera

Owl 640 VIS-SWIR digital camera	OW17-VS-CL-640
Power Supply Cable	RPL-HR4-K

Optional Accessories

Mini PC with Xcap STD and frame grabber	RPL-PC-EL1
EPIX® E8 base CL card	RPL-EPIX-E8
EPIX® XCAP STD software	RPL-XCAP-STD
Camera Link Cable, 2m ⁴	RPL-CL-CBL-2M
Optical Lenses ⁵	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass

Note 2: Measured @ 30°C

Note 3: Extended Operating Temperature range on request

Note 4: Longer CL cable available

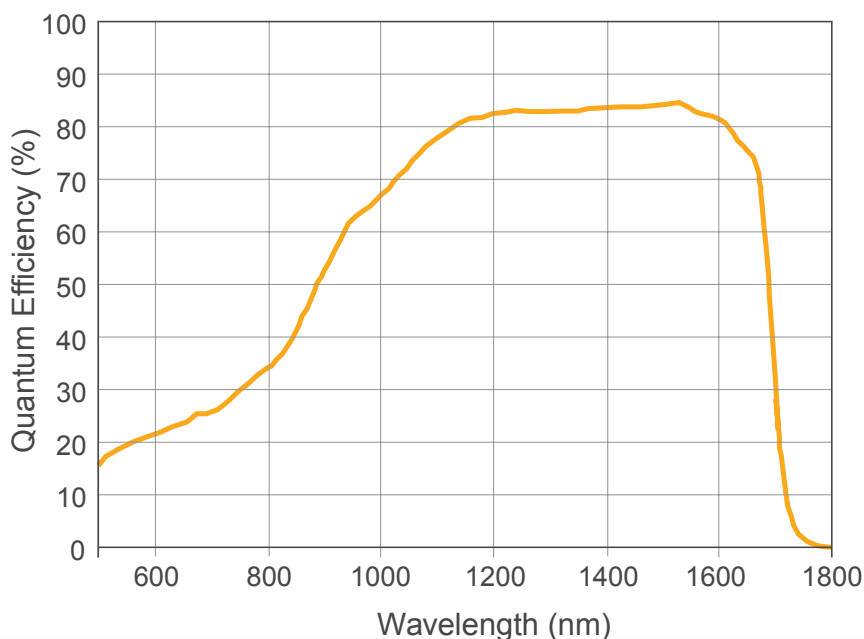
Note 5: Please consult us to check our range of lenses

Note 6: Typical Value

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

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

Quantum Efficiency



Applications

Surveillance

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

Scientific

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

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