

# Owl 640 Mini VIS-SWIR

VGA resolution, low power, VIS-SWIR camera  
640 x 512 • 15  $\mu$ m x 15 $\mu$ m pixel pitch • VIS-SWIR Technology •



## Key Features and Benefits

*TEC-less Visible SWIR technology*

- **TEC-less Visible SWIR**  
Enables ultra low power
- **15 $\mu$ m x 15 $\mu$ m pixel pitch**  
Enables highest resolution VIS-SWIR image
- **Ultra high intrascene dynamic range**  
Enables simultaneous capture of bright & dark portions of a scene
- **Ultra compact, Rugged, No fan**  
Specially designed for integration into small OEM platforms

Resolution	<b>640 x 512</b>
Ultra Low Power	<b>&lt;2.5W</b>
Optical Interface	<b>C-mount</b>
Wavelength Range	<b>VIS-SWIR</b>

## Specification for Owl 640 Mini 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 <sup>1</sup>	0.4µm to 1.7µm
Readout Noise (RMS) LG = Low Gain HG = High Gain	LG: <190 electrons (174 electrons typical) HG: <50 electrons (38 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
Full Well Capacity	LG: 650ke- HG: 9ke-
Pixel Operability	>99.5%
Output Format	14 bit Camera Link (base configuration)
Exposure time	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	Up to 120Hz
Dynamic Range (Typical)	LG: 72dB, HG: 49dB
Optical Interface	C mount
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±0.5V
TE Cooling	None
Image Correction	2 point NUC (offset & gain) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non-Uniformity Correction, Gamma, Pk/Av, ROI
Camera Power Consumption <sup>2</sup>	< 2.5W
Operating Case Temperature <sup>3</sup>	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H) <sup>4</sup>	62.21mm x 42.00mm x 42.00mm
Weight	170g

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## Ordering Information

### Camera

Owl 640 Mini VIS-SWIR Digital	OW1.7-VS-CL-LP-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	RPL-MCL-CBL-2M
Optical Lenses <sup>5</sup>	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass  
Note 2: Measured @ 30°C

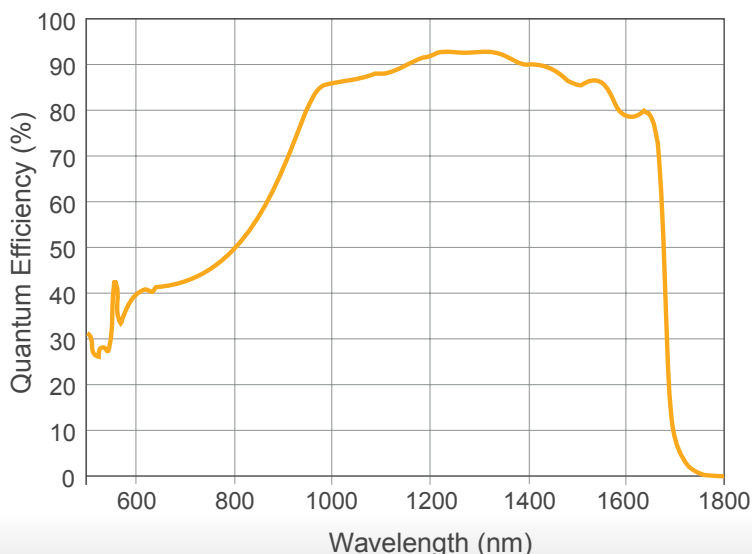
Note 3: Extended Operating Temperature range on request  
Note 4: Dimensions include all connector parts on camera interface

Note 5: 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](http://www.raptorphotonics.com)

## Quantum Efficiency



\*Data supplied by sensor manufacturer

## Applications

- 860, 1064 & 1550nm laser line detection
- Hand Held Goggles
- Vision enhancement
- Machine vision
- Beam profiling

Document #: USOWL1.7-VS-CL-LP-640 / AE 319R1



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