

# Owl 640-A VIS-SWIR

VGA resolution, low noise, VIS-SWIR camera  
640x512 • CCIR/EIA •



**Analogue**

## Key Features and Benefits

*Cooled VGA Surveillance Analogue InGaAs*

- **VIS-SWIR technology**  
Compatible with VIS-SWIR illuminators, markers & pointers
- **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
- **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	<b>640 x 512</b>
Analogue output	<b>CCIR / EIA</b>
Readout noise <sup>5</sup>	<b>36 electrons</b>
Wavelength Range	<b>VIS-SWIR</b>

## Specification for Owl 640-A VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 480 (EIA) / 640 x 512 (CCIR)
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 (36 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
Full Well Capacity	LG: 650ke- HG: 10ke-
Pixel Operability	>99.5%
Analogue Output Format	CCIR / EIA
Exposure time	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	25Hz (CCIR) / 30Hz (EIA)
Optical Interface	C mount or M42
Dynamic Range	LG: 71dB HG: 49dB
Camera Setup / Control	RS 485
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, NUC, Gamma, Pk/Av, TEC,
Camera Power Consumption <sup>2</sup>	<5W with TEC OFF, NUC ON <6W with TEC ON, NUC ON
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>	76.23mm x 50.00mm x 50.00mm
Weight	282g

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## Ordering Information

### Camera

Owl 640 VIS-SWIR analogue-CCIR	OW1.7-VS-AC-640
Owl VIS-SWIR analogue-EIA	OW1.7-VS-AE-640
Power Supply Cable	RPL-MDM-CBL-B

### Optional Accessories

EPIX® Analogue video card	RPL-EPIX-SV5
Owl/Hawk PSU cable MDM to Jack + brick RPL-MDM-CBL-J	RPL-MDM-CBL-J
Owl/Hawk PSU cable MDM to flying leads	RPL-MDM-CBL-F
Optical Lenses <sup>5</sup>	RPL-xx-xxxx

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

Note 2: Measured in an ambient of 25°C with adequate heat sinking

Note 3: Extended Operating Temperature range on request

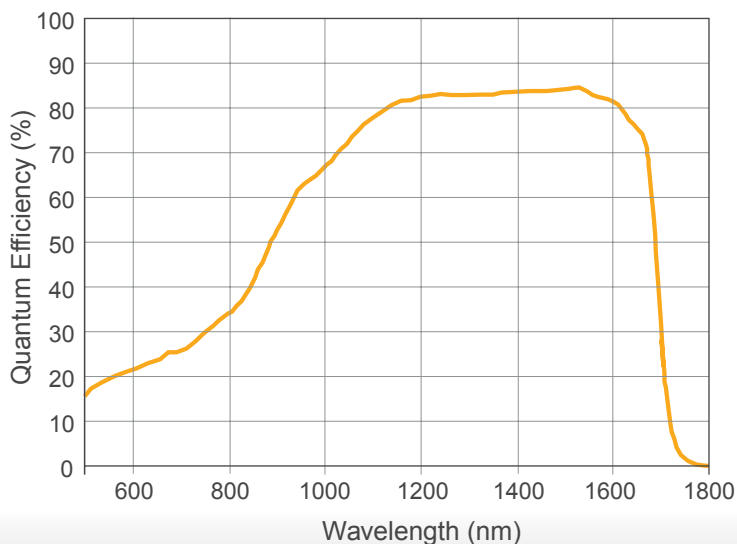
Note 4: Dimensions include all connector parts on camera interface

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



## Applications

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

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