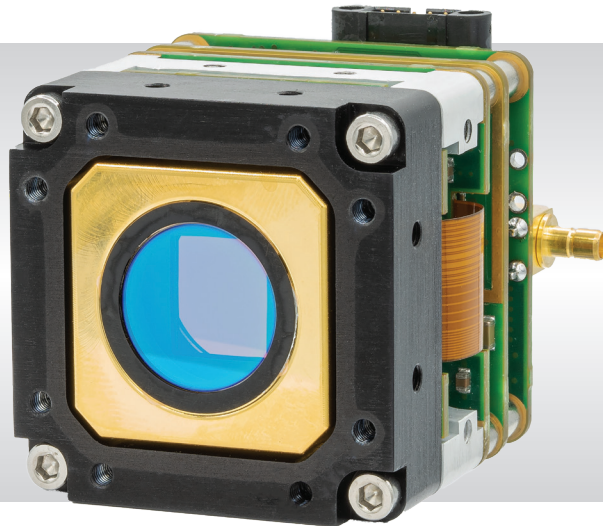


# Owl 640 N SDI - OEM ONLY

High resolution, High Sensitivity, Digital VIS-SWIR camera  
640 x 512 • 15µm x 15µm Pixel Pitch • <18e readout noise •



## Key Features and Benefits

*The best performing VIS-SWIR camera in the World!*

- **Ultra low noise sensor**  
Enables ultimate night vision VIS-SWIR image
- **640 x 512, 10µm pitch VIS-SWIR technology**  
Enables highest resolution imaging from 0.6µm to 1.7µm
- **On-board Automated Gain Control (AGC)**  
Enables clear video in all light conditions
- **On-board Intelligent 3 point NUC**  
Enables highest quality photos
- **HD-SDI SMPTE-274M**  
Provides full HD resolution 1080p/30

Resolution	<b>640 x 512</b>
Frame rate	<b>Up to 120Hz</b>
HD-SDI	<b>1080p/30</b>
Wavelength Range	<b>VIS-SWIR</b>

## Specification for Owl 640 N SDI

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 1512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.2mm
Spectral response <sup>1</sup>	0.6µm to 1.7µm
Readout Noise (RMS) <sup>2</sup> LG = Low Gain HG = High Gain	LG: <190 electrons (174 electrons typical) HG: <50 electrons (36 electrons typical)
Peak Quantum Efficiency	>90% @ 1.3µm
Pixel Well Depth	Low Gain: >200ke-, High Gain: >10ke
Pixel Operability	>99.5%
Digital Output Format	10 bit serial SMPTE274M 1080 p/30
Exposure time	LG: 1µs to 27.33ms
Shutter mode	Global shutter
Frame Rate	10-60Hz
Communication	RS422
Optical Interface	C mount (selection of SWIR lens available)
Dynamic Range	LG: 62dB, HG: 55dB
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 <sup>3</sup>	<8W with TEC ON, NUC ON
Operating Case Temperature <sup>4</sup>	-40°C to +71°C
Storage Temperature	-55°C to +85°C
Dimensions (L*W*H) <sup>5</sup>	68.8mm x 46.0mm x 49.5mm
Weight	200g

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## Ordering Information

### Camera

Owl 640 Digital Camera	OW17-VS-SD-640-N
Power Supply Cable	RPL-M80-9411005

### Optional Accessories

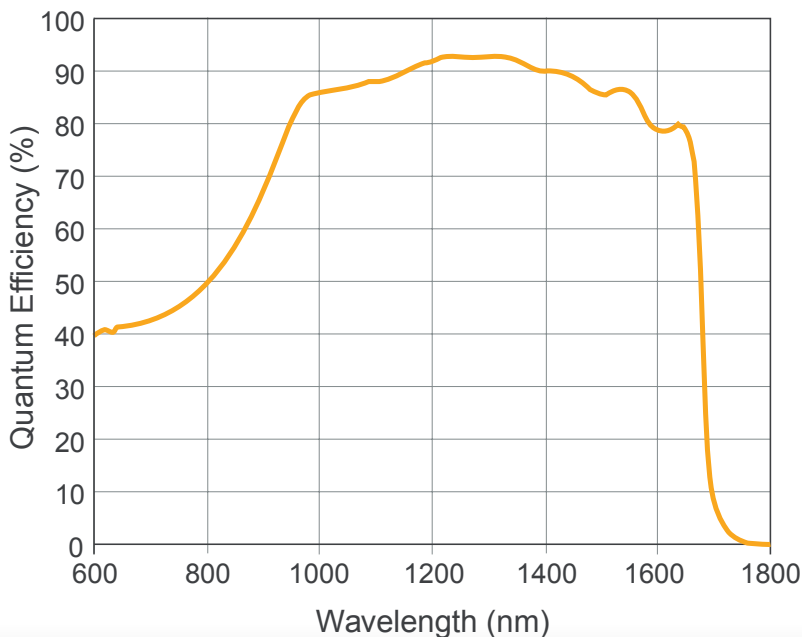
Optical Lenses <sup>6</sup>	RPL-xx-xxxx
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- Note 1: Optional filters available: Low, High or bandpass.  
 Note 2: Typical readout noise is calculated from an average of the last 20 cameras shipped.  
 Note 3: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.  
 Note 4: Extended operating temperature range on request.  
 Note 5: Dimensions include all connector parts on the camera interface.  
 Note 6: 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

### Surveillance

- HD long range day / night SWIR imaging
- Airborne and Ground Payload
- Hand Held Systems
- Driving Vision Enhancement (DVE)
- Airborne EVS
- Vision enhancement

### Scientific

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

Document #: INOW1.7-VS-SD-640-N 0322



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