

# Owl 1280 VIS-SWIR

High resolution, High Sensitivity, Digital VIS-SWIR camera  
1280 x 1024 VIS-SWIR • 10 $\mu$ m x 10 $\mu$ m • <50e readout noise



## Key Features and Benefits

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

- **1280 x 1024, 10 $\mu$ m pitch VIS-SWIR technology**  
Enables highest resolution imaging from 0.4 $\mu$ m to 1.7 $\mu$ m
- **<50 electrons readout noise**  
Enables highest VIS-SWIR detection limit
- **On-board Automated Gain Control (AGC)**  
Enables clear video in all light conditions
- **On-board Intelligent 3 point NUC**  
Enables highest quality photos

Resolution	<b>1280 x 1024</b>
Frame rate	<b>10 to 60Hz</b>
Camera link	<b>12bit</b>
Wavelength Range	<b>VIS-SWIR</b>

# Specification for Owl 1280 VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	1280 x 1024
Pixel Pitch	10µm x 10µm
Active Area	12.8mm x 10.24mm
Spectral response <sup>1</sup>	0.4µm to 1.7µm
Readout Noise (RMS) LG = Low Gain HG = High Gain	LG: <190 electrons (160 electrons typical) HG: <50 electrons (47 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
Full Well Capacity	LG: 450ke- HG: 10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<19,000 @ 15°C
Digital Output Format	12bit CameraLink (Medium Configuration)
Exposure time	LG: 300µs to 86.5ms HG: 600µs to 86.5ms
Shutter mode	Global shutter
Frame Rate	10 to 60Hz
Optical Interface	C mount (selection of SWIR lens available) or M42
Dynamic Range	LG: 69dB, HG: 47dB
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>2</sup>	<3W with TEC OFF, NUC ON <5W with TEC ON, NUC ON (ambient of 25°C)
Operating Case Temperature <sup>3</sup>	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions	61.15mm x 50.00mm x 50.00mm
Weight	247g

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# Ordering Information

## Camera

Owl 1280 VIS-SWIR digital camera	OW1.7-VS-CL-1280
Power Supply Cable	RPL-HR4-K

## Optional Accessories

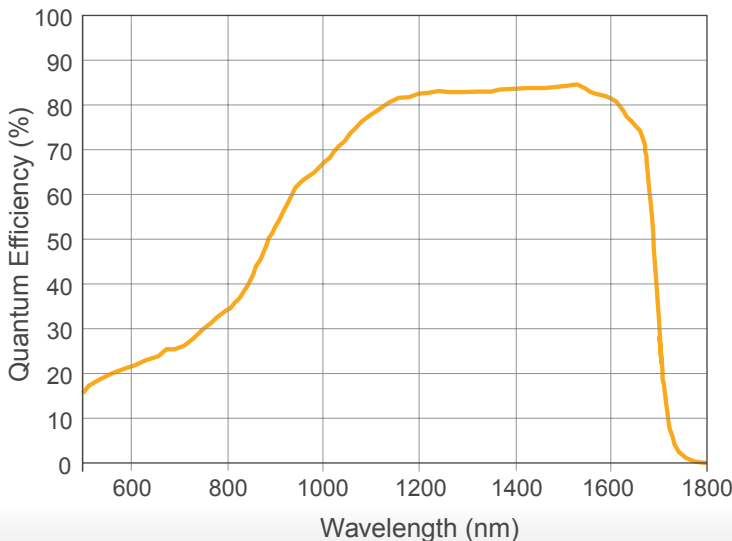
Mini PC with Xcap STD and frame grabber	RPL-PC-EL1
EPIX® E8 base CL card	RPL-EPIX-E8
EPIX® XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m (x2) <sup>4</sup>	RPL-MCL-CBL-2M
Optical Lenses <sup>5</sup>	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass  
 Note 2: Measured @ 30°C  
 Note 3: Extended Operating Temperature range on request  
 Note 4: Two cables required  
 Note 5: Please consult us to check our range of lenses

Demo is available on request.  
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Detailed technical drawings can be downloaded at [www.raptorphotonics.com](http://www.raptorphotonics.com)

# Quantum Efficiency



# Applications

## Surveillance

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

## Scientific

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

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