

# Owl 320 High Speed VIS-SWIR

High speed, digital VIS-SWIR camera

320 x 256 • Frame Rate up to 344Hz • VIS-SWIR Technology •



## Key Features and Benefits

### *High-Speed VIS-SWIR Technology*

- **VIS-SWIR technology**  
Enables high speed imaging from 0.4 $\mu$ m to 1.7 $\mu$ m
- **Easy control of camera parameters**  
Control of Exposure, Frame rate, Gain, Temperature, trigger, etc
- **Ultra compact, Low power (< 5W)**  
Ideal for hand-held, mobile or airborne systems
- **Rugged, No fan**  
Enables integration into UAV, handheld or Electro-Optic systems

|                  |                    |
|------------------|--------------------|
| Resolution       | <b>320 x 256</b>   |
| Full Frame Rate  | <b>up to 344Hz</b> |
| Camera Link      | <b>14bit</b>       |
| Wavelength Range | <b>VIS-SWIR</b>    |

## Specification for Owl 320 High Speed VIS-SWIR

|  |   |
|--|---|
| Sensor Type  | InGaAs PIN-Photodiode   |
| Active Pixel   | 320 x 256   |
| Pixel Pitch  | 30µm x 30µm   |
| Active Area  | 9.6mm x 7.68mm  |
| Spectral response <sup>1</sup>   | 0.4µm to 1.7µm  |
| Readout Noise (RMS)  | High Gain: <225 electrons (202 electrons typical)                     |
| Quantum Efficiency   | >80% @ 1.55µm   |
| Full Well Capacity   | High Gain: 17ke-  |
| Pixel Operability  | >99%  |
| Digital Output Format  | 14 bit Camera Link (Base Configuration)                               |
| Exposure time  | 500ns to [Frame Period – Readout Time]                                |
| Frame Rate   | Up to 344Hz <sup>2</sup>  |
| Dynamic Range (Typical)  | High Gain: 39dB   |
| Trigger interface  | Trigger IN and OUT – TTL compatible                                   |
| Image Correction   | 2 point NUC (offset & gain)<br>+ pixel correction                     |
| Optical Interface  | C mount (selection of SWIR lens available)                            |
| Power supply   | 12V DC ±0.5V  |
| TE Cooling   | Active  |
| Camera Power Consumption   | <5W with TEC OFF, NUC ON<br><6W 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   | 74.59mm x 50.00mm x 50.00mm   |
| Weight   | 250g  |
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## Ordering Information

### Camera

Owl 320 VIS-SWIR digital camera OW1.7-VS-CL-S

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<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: Higher frame rates available when using ROI

Note 3: Extended Operating Temperature range on request

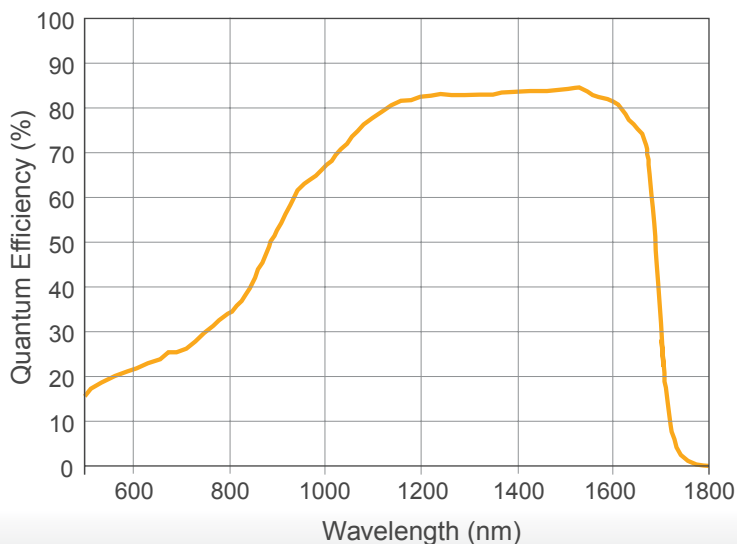
Note 4: Longer CL cable available

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

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

### Scientific

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