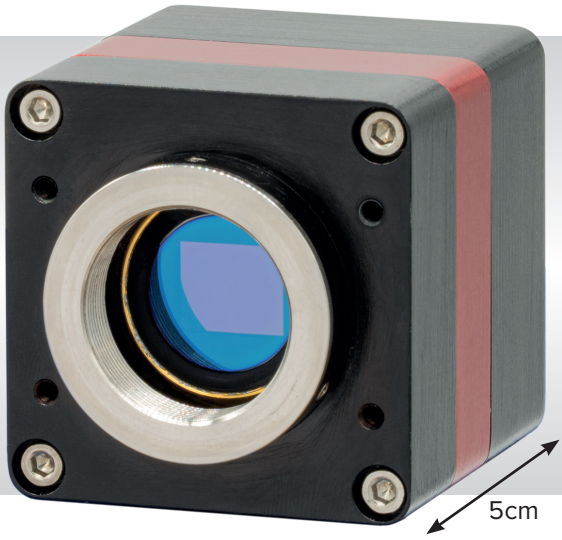
Owl 1280

High resolution, High Sensitivity, Digital VIS-SWIR camera
1280 x 1024 • 10µm x 10µm Pixel Pitch • 28e- readout noise •

Custom Options Available *(See overleaf)*



Key Features and Benefits

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

- **1280 x 1024, 10µm pitch VIS-SWIR technology**
  Enables highest resolution imaging from 0.6µm to 1.7µm
- **28e- 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
- **Advanced video enhancement and signal processing features**
  Optimizing image quality and output in real-time

Resolution	**1280 x 1024**
Frame rate	**10 to 60Hz**
Camera link	**12 bit**
Wavelength Range	**VIS-SWIR**

Raptor photonics

www.raptorphotonics.com

Specification for Owl 1280

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	1280 x 1024
Pixel Pitch	10µm x 10µm
Active Area	12.8mm x 10.24mm
Spectral response[1]	0.6µm to 1.7µm
Readout Noise (RMS)[2] **LG = Low Gain HG = High Gain**	LG: <180 electrons (160 electrons typical) HG: <50 electrons (28 electrons typical)
Peak Quantum Efficiency	>90% @ 1.3µm
Full Well Depth	LG: 450ke- HG: 10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<19,000 @ 15°C
Digital Output Format	12 bit Camera Link (medium configuration)
Exposure time	LG: 10µs to 92.5ms HG: 10µs to 86.5ms
Shutter mode	Global shutter
Frame Rate	10 to 60Hz
Optical Interface	C mount (selection of SWIR lens avaliable)
Dynamic Range	LG: 69dB, HG: 51dB
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	Eg. Exposure, intelligent AGC, Non Uniformity Correction, Gamma, Pk/Av, TEC, ROI, etc
Camera Power Consumption[3]	<8W with TEC ON, NUC ON
Operating Case Temperature[4]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions (L*W*H)[5]	67.60mm x 50.00mm x 50.00mm
Weight	247g

Demo is available on request.
Pricing AOR subject to volumes.

Detailed technical drawings can be downloaded at www.raptorphotonics.com

Ordering Information

Camera

Owl 1280 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 frame grabber	RPL-EPIX-E8
EPIX® XCAP Std software	RPL-XCAP-STD
Camera Link Cable (2m)[6]	RPL-MCL-CBL-2M
Optical Lenses[7]	RPL-xx-xxxx

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: Two cables are required. The maximum cable length is 2m. For more information, please refer to the user manual.
Note 7: Please consult us to check our range of lenses.

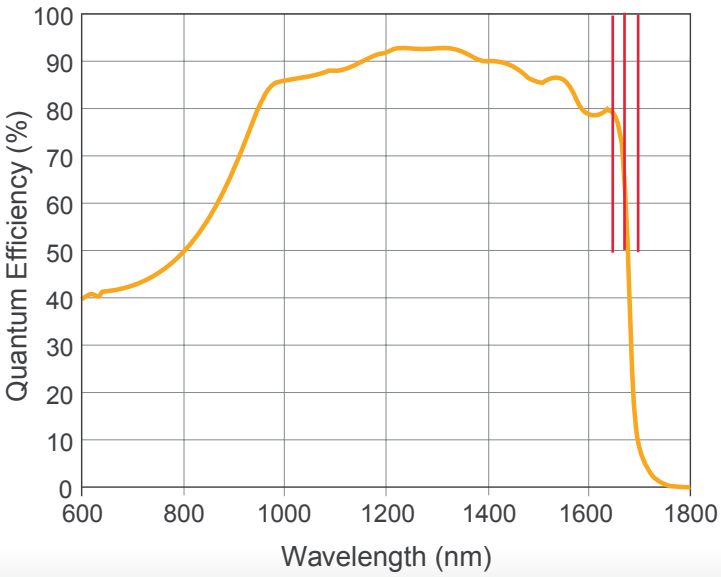
Custom Options

- No C-Mount, M42
- Board level ver email 17-02-2021
- Extended operational temperature -40°C to +75°C
- Flexi-rigid electronics to fit specific EO systems
- Customized mechanics
- Digital video output eg HD-SDI

Firmware Features

- On-board Automated Gain Control (AGC)
- On-board intelligent 3-point NUC
- Binning
- Crosshairs
- Vertical and horizontal image flip
- Edge and sharpen filters
- Contrast and gamma adjust

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

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