

Owl 1280 VIS-SWIR

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



Key Features and Benefits

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

- **1280 x 1024, 10 μ m pitch VIS-SWIR technology**
Enables highest resolution imaging from 0.4 μ m to 1.7 μ 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	1280 x 1024
Frame rate	10 to 60Hz
Camera link	12bit
Wavelength Range	VIS-SWIR

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 ¹	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 ²	<3W with TEC OFF, NUC ON <5W with TEC ON, NUC ON (ambient of 25°C)
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions	61.15mm x 50.00mm x 50.00mm
Weight	247g

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors. This product is under the export control of UK government and maybe subject to an Single Individual export licence before shipment.

Ordering Information

Camera

Owl 1280 VIS-SWIR digital camera	OW17-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) ⁴	RPL-MCL-CBL-2M
Optical Lenses ⁵	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass
Note 2: Measured @ 30°C

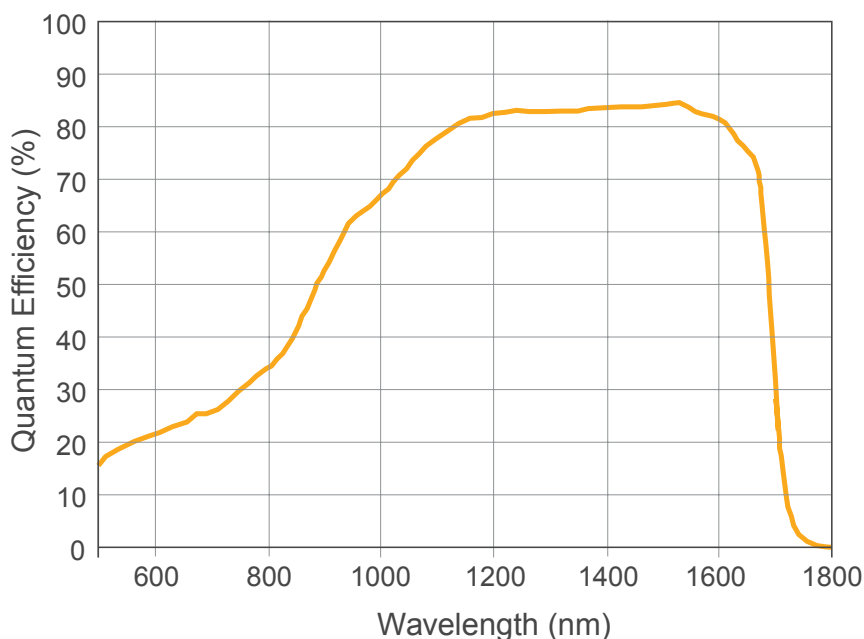
Note 3: Extended Operating Temperature range on request
Note 4: Two cables required

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

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

Detailed technical drawings
can be downloaded at
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

Document #: INOWL17-VS-CL-1280 1118



Willowbank Business Park
Larne, Co Antrim
BT40 2SF,
Northern Ireland

Raptor Photonics Ltd. (UK)
T: +44(0)2828 270 141
E: sales@raptorphotonics.com
www.raptorphotonics.com

Raptor Photonics Inc. (USA)
T: +1 (877) 230-4836
E: sales@raptorphotonics.com
www.raptorphotonics.com

