

Owl 1280 VIS-SWIR Digital

High resolution, High Sensitivity, Digital VIS-SWIR camera
1280 x 1024 VIS-SWIR • 10 μ m x 10 μ m • <35e 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
- **640 x 512, 20 μ m pitch with 2x2 binning**
Enables highest sensitivity for low light imaging
- **<35 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	Up to 60Hz
Cameralink	14bit
Wavelength Range	VIS-SWIR

Specification for Owl 1280 VIS-SWIR Digital

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	1280 x 1024 / 640 x 512 (binning)
Pixel Pitch	10µm x 10µm / 20µm x 20µm (binning)
Active Area	12.8mm x 10.24mm
Spectral response ¹	0.4µm to 1.7µm
Noise (RMS, typical)	<170 electrons Low Gain, <35 electrons High Gain
Quantum Efficiency	Peak >85% (>73% @ 1.064µm, >80% @ 1.55µm)
Pixel Well Depth	Low Gain: 500Ke-, High Gain: 10Ke-
Pixel Operability	>99.5%
Digital Output Format	14 bit CameraLink (Medium Configuration)
Exposure time	1µs to 1 / frame rate
Shutter mode	Global shutter
Frame Rate	10Hz to 60Hz programmable, 25ns resolution
Optical Interface	C mount (selection of SWIR lens available) or M42
Camera Setup / Control	CameraLink
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±10%
TE Cooling	ON / OFF
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, ALPD
Camera Power Consumption ²	< 3W (TEC OFF, NUC ON) <5W (TEC ON in ambient, NUC ON)
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions & Weight	50mm x 50mm x 61.2mmv / 247g

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Ordering Information

Camera

OWL SWIR digital camera C-Mount	OW17-VS-CL-1280
OWL SWIR digital camera M42 Mount	OW17-VS-CL-1280-M42
OWL Power Supply Cable	RPL-HR4-K

Optional Accessories

EPIX(R) Medium/Full CL card	RPL-EPIX-EL1
EPIX(R) notebook CL card	RPL-EPIX-EC1
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m ⁴	RPL-CL-CBL-2M
Optical SWIR 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

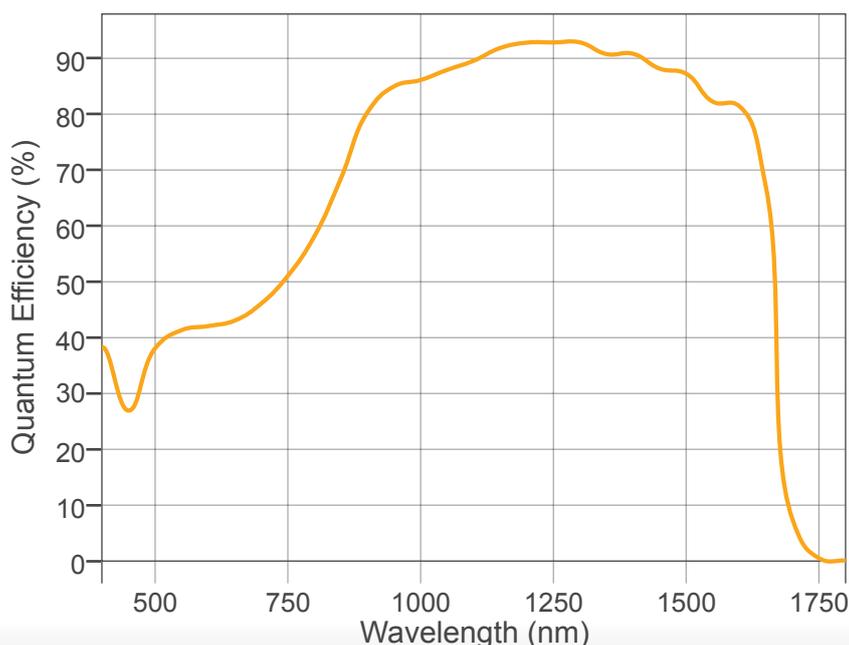
Note 4: Longer CL cable available

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

Quantum Efficiency



Applications

Surveillance

- ALPD: 860, 1064 & 1550nm laser spot detection
- 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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