

Night Owl 640 VIS-SWIR

Ultra low noise, digital VIS-SWIR camera,
640 x 512 • 18 electrons • VIS-SWIR technology •



Key Features and Benefits

The best performing VIS-SWIR camera in the World!

- **Ultra low noise sensor**
Enables ultimate night vision VIS-SWIR image
- **VIS-SWIR technology**
Compatible with VIS-SWIR illuminators, markers & pointers
- **15µm x 15µm pixel pitch**
Enables highest resolution VIS-SWIR image
- **On-board Automated Gain Control (AGC)**
Enables clear video in all light conditions
- **Ultra compact, Low power**
Ideal for hand-held, mobile or airborne systems

Resolution	640 x 512
Frame rate	Up to 120Hz
Readout noise	18 electrons
Wavelength Range	VIS-SWIR

PRELIMINARY

Specification for Night Owl 640 VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.2mm
Spectral response ¹	0.4µm to 1.7µm
Noise (RMS)	< 25 electrons High gain (18 electrons typical)
Quantum Efficiency	Peak >75% (>60% @1064nm, >70% 1550nm)
Pixel Well Depth	Low Gain: 650ke-, High Gain: 12ke-
Pixel Operability	>99.5%
Digital Output Format	14 bit CameraLink (Base Configuration)
Exposure time	1µs to 1 / frame rate
Shutter mode	Global shutter
Frame Rate	Up to 120Hz programmable, 25ns resolution
Optical Interface	C mount
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±10%
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	< 3.5W (TEC OFF, NUC ON) <4W (TEC ON in ambient, NUC ON)
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H) ⁴	50mm x 50mm x 82mm
Weight	282g

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Ordering Information

Camera

OWL VIS-SWIR digital camera NO1.7-VS-CL-640
Low noise, C-mount

OWL Power Supply Cable RPL-HR4-K

Optional Accessories

EPIX(R) base CL card RPL-EPIX-EB1

EPIX(R) XCAP STD software RPL-XCAP-STD

CameraLink Cable, 2m⁵ RPL-CL-CBL-2M

Optical SWIR lenses⁶ 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: Dimensions include all connector parts on camera interface

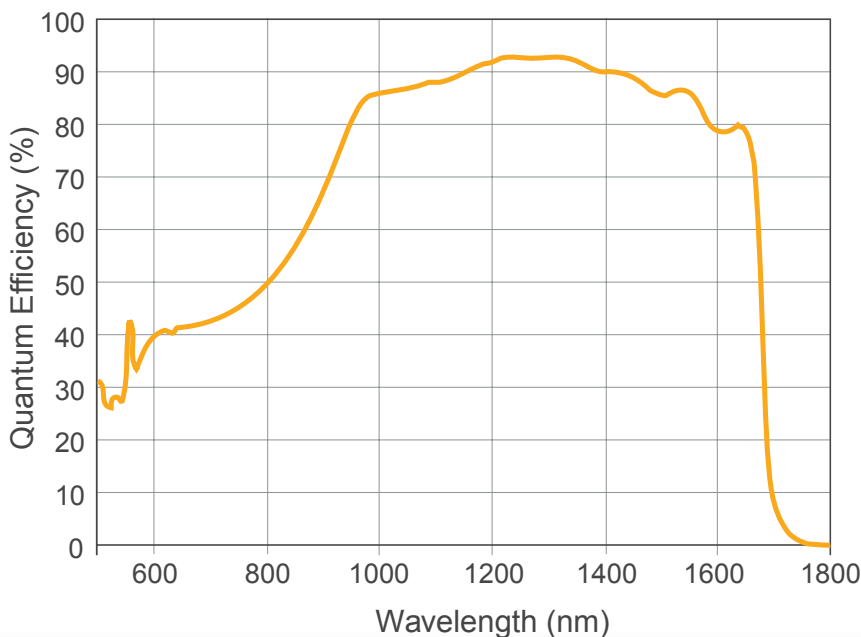
Note 5: Longer CL cable available

Note 6: 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



*Data supplied by sensor manufacturer

Applications

Surveillance

- 860, 1064 & 1550nm laser line detection
- Active Imaging
- Airborne Payload
- Hand Held Goggles
- Imaging through Fog
- Range Finding
- Vision enhancement

Scientific

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

Document #: INNO1.7-VS-CL-640 319



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