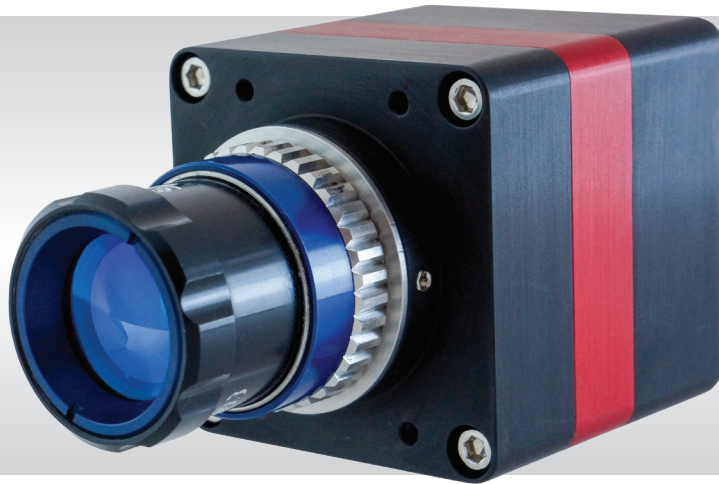


Owl 640 T

High Sensitivity, Digital VIS-SWIR camera

640 x 512 • 10µm x 10µm Pixel Pitch • <50e readout noise •



Key Features and Benefits

The World's first SWaP optimised 1/2" / VGA sensor with VIS-SWIR response

- **1/2" Sensor Format**
Better for optical design, ideal for OEM integration into Electro-Optic systems.
- **10µm x 10µm Pixel Pitch**
Compatible with VIS-SWIR illuminators, markers & pointers
- **<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 | 640 x 512 |
| Frame rate | 10 to 60Hz |
| Camera link | 12 bit |
| Wavelength Range | VIS-SWIR |

Specification for Owl 640 T

| | |
|--|--|
| Sensor Type | InGaAs PIN-Photodiode |
| Active Pixel | 640 x 512 |
| Pixel Pitch | 10µm x 10µm |
| Active Area | 6.4mm x 5.12mm |
| Spectral response ¹ | 0.4µm to 1.7µm |
| Readout Noise (RMS) ² LG = Low Gain HG = High Gain | LG: <190e- (160e- typical) HG: <50e- (47e- typical) |
| Peak Quantum Efficiency | >90% @1.3µm |
| Full Well Capacity | LG: 450ke- HG: 10ke- |
| Pixel Operability | >99.5% |
| Dark Current (e/p/s) | <19,000 @ 15°C |
| Digital Output Format | 12 bit Camera Link (Base Configuration) |
| Exposure time | LG: 20µs to 92.5ms HG: 40µs 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 (Typical) | 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, ALC ROI |
| 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 |

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Ordering Information

Camera

| | |
|--------------------------|------------------|
| Owl 640 T Digital Camera | OW17-VS-CL-640-T |
| Power Supply Cable | RPL-HR4-K |

Optional Accessories

| | |
|---|----------------|
| Mini PC with XCAP Std and frame grabber | RPL-PC-EL1 |
| EPIX® EB1 Frame Grabber | RPL-EPIX-EB1 |
| 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.

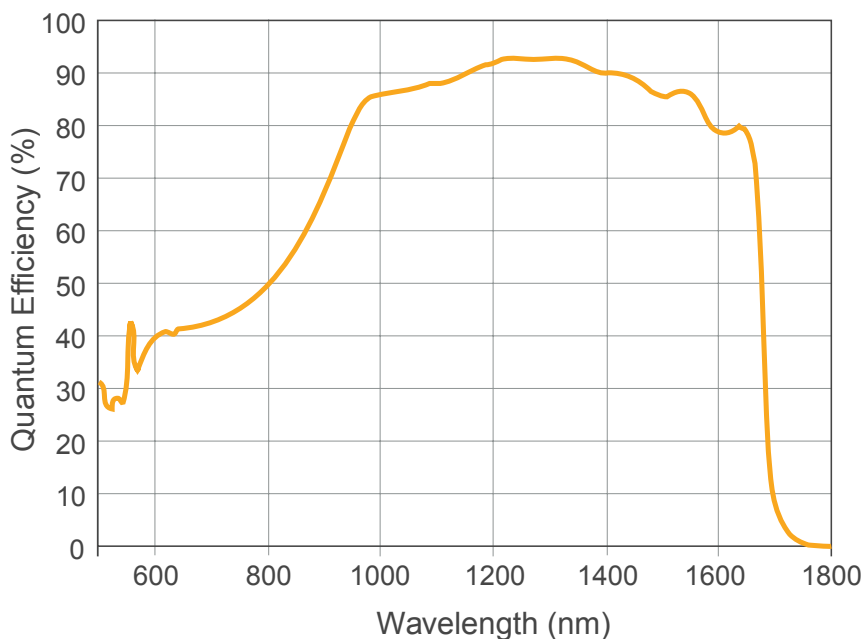
Note 6: One cable required. The maximum cable length is 2m. For more information, please refer to the user manual.

Note 7: Please consult us to check our range of lenses.

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
- 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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