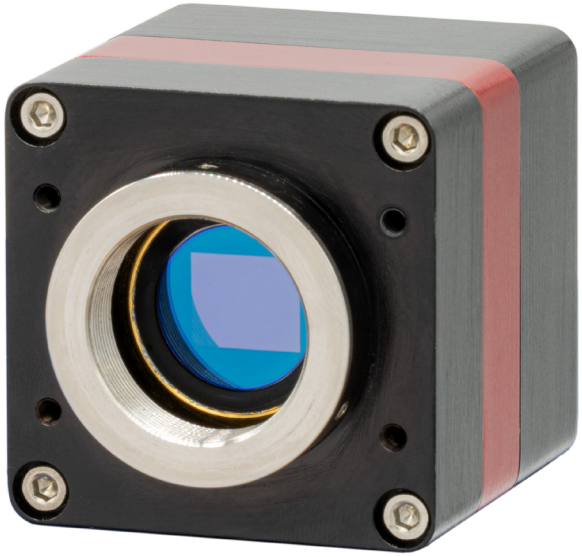
Raptor photonics

# Owl 640 II

## 640 x 512,VIS-SWIR Camera



## Key Features and Benefits

- **640 x 512,15µm pitch VIS-SWIR sensor**
  VGA resolution imaging from 0.6µm to 1.7µm
- **On-board Intelligent 3 point NUC and ALC**
  Real time, optimal video in all light conditions
- **Designed for Harsh enviroments**
  High Shock, Vibration and extreme temperature resistance
- **Global Shutter**
  120Hz full frame video, with no distortion (ideal for triggering)
- **Low Noise Electronics**
  No artifical noise added, optmising low light capability

| | |
|---|---|
| **Resolution** | 640 x 512 |
| **Frame Rate** | Up to 120Hz |
| **Camera Link** | 14 bit |
| **Wavelength Range** | VIS-SWIR |

## Specification for Owl 640 II

| | |
|---|---|
| **Sensor** | InGaAs PIN-Photodiode |
| **Active Pixel** | 640 x 512 |
| **Pixel Pitch** | 15 µm x 15µm |
| **Active Area** | 9.6mm x 7.68mm |
| **Spectral Response[1]** | 0.6µm to 1.7µm |
| **Readout Noise (RMS)[2]** | LG: <190e- (174e- typical)<br>HG: <50e- (36e- typical) |
| **Peak Quantumn Efficeny** | >90% @1.3µm |
| **Full Well Capacity** | LG: 650ke-<br>HG: 10ke- |
| **Pixel Operability** | >99.5% |
| **Dark Current (e/p/s)[3]** | <28,000 @ 15˚C |
| **Digital Output Format** | 14 bit Camera Link (Base Configuration / SDR) |
| **Exposure Time[4]** | 10µs to 26.8s |
| **Shutter Mode** | Global Shutter |
| **Frame Rate** | Up to 120Hz |
| **Optical Interface[5]** | C Mount |
| **Dynamic Range (Typ)** | LG: 71dB<br>HG: 49dB |
| **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[6]** | <4W with TEC ON, NUC ON |
| **Operating Temperature[7]** | -20˚C to +55˚C |
| **Storage Temperature** | -30˚C to +60˚C |
| **Dimensons (excluding standard mounting)[8]** | 69.4mm x 50.00mm x 50.00mm |
| **Weight** | 242g |

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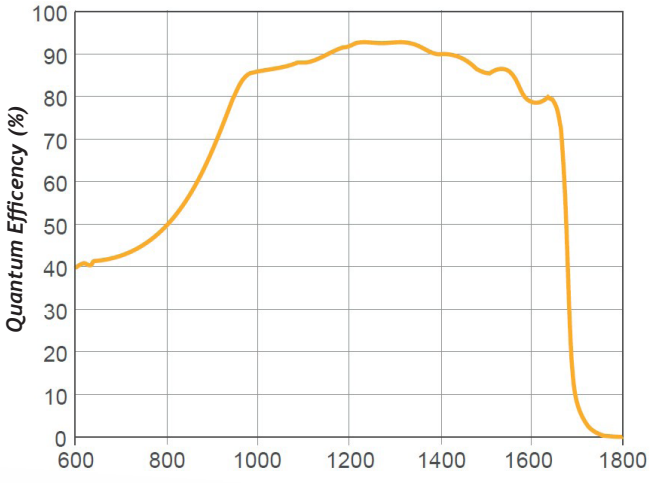


*Data Supplied by Sensor Manufacturer

## Specification for Owl 640 II

### Camera

| | |
|---|---|
| OWL 640 II Digital Camera | OW1.7-VS-CL-640-II |
| Power Supply Cable | RPL-HR4-K |

### Optional Accessories

| | |
|---|---|
| Mini PC with XCAP STD and Frame Grabber | RPL-PC-mf2280 |
| Thunderbolt Frame | RPL-mf2280 |
| EPIX® EB1 Frame Grabber | RPL-EPIX-EB1 |
| EPIX® XCAP STD Software | RPL-XCAP-STD |
| MDR-SDR CameraLink Cable[9] (2m) | RPL-MCL-CBL-2M |
| Optical Lenses[10] | RPL-xx-xxx |

### Applications

- 860,1064 & 1550nm laser line detection
- Active Imaging
- Airborne Payload
- Handheld Systems
- Imaging through Fog
- Range Finding
- Vision Enhancement
- Hyperspectral Imaging
- Semi Conductor Inspection
- Solar Cell Inspection

For detailed tehnical drawings, volume pricing or to set up a demo, contact us at sales@raptorphotonics.com

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