Raptor photonics

Owl 640 M

640 x 512, VIS-SWIR Camera

CAMERA Link

Key Features and Benefits

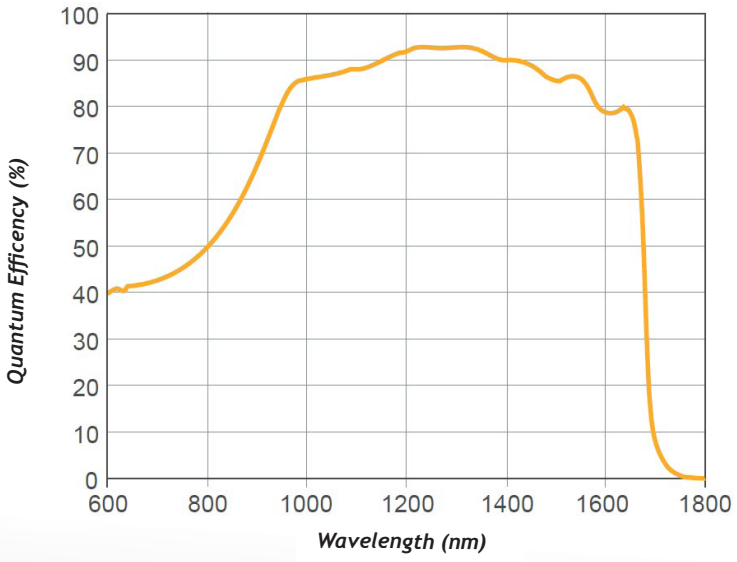
- **640 x 512,15µm pitch VIS-SWIR sensor**
  HD resolution imaging from 0.6µm to 1.7µm
- **On-board Intelligent 3 point NUC and ALC**
  Real time, optimal video in all light conditions
- **Designed for Harsh enviroments**
  High Shock, Vibration and extreme temperature resistance
- **Global Shutter**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

Resolution	640 x 512
Frame Rate	Up to 120Hz
Ultra Low Power	<2.5W
Wavelength Range	VIS-SWIR

Specification for Owl 640 M

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) HG: <50e- (36e- typical)
Peak Quantumn Efficeny	>90% @1.3µm
Full Well Capacity	LG: 650ke- HG: 9ke-
Pixel Operability	>99.5%
Digital Output Format	14 bit Camera Link (Base Configuration / SDR)
Exposure Time[3]	10µs to 26.8s
Shutter Mode	Global Shutter
Frame Rate	Up to 120Hz
Optical Interface	C Mount
Dynamic Range (Typ)	LG: 71dB HG: 48dB
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[4]	<2.5 (NUC ON)
Operating Temperature[5]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensons (excluding standard mounting)[6]	69.4mm x 50.00mm x 50.00mm
Weight	260g

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictoral or typographical errors.This product is under the export control of the UK goverment and may be subject to a single individual export license before shipment. 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: In practice, the maximum exposure time will bedark current limited. Note 4: Measured in an ambient of 25˚C with adequateheat sinking. For full detailed power consumption values, please refer to the user manual. Note 5: Extended operating temperature range on request. Note 6: Dimensions include all connector parts on camera interface. Note 7: Longer Camera Link cable available. Note 8: Please consult us to check our range of lenses



Data Supplied by Sensor Manufacturer

Specification for Owl 640 M

Camera

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

Optional Accessories

Mini PC with XCAP STD and Frame Grabber	RPL-PC-mf2280
Thunderbolt Frame Grabber	RPL-mf2280
EPIX® EB1 Frame Grabber	RPL-EPIX-EB1
EPIX® XCAP STD Software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[7]	RPL-MCL-CBL-2M
Optical SWIR Lenses[8]	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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