Owl 640 M

Low power, VIS-SWIR camera
640 x 512 • 15µm x 15µm pixel pitch •

Key Features and Benefits

TEC-less Visible SWIR technology

- **TEC-less Visible SWIR**
  Enables ultra low power
- **15µm x 15µm pixel pitch**
  Enables highest resolution VIS-SWIR image
- **Ultra high intrascene dynamic range**
  Enables similtaneous capture of bright & dark portions of a scene
- **Ultra compact, Rugged, No fan**
  Specially designed for integration into small OEM platforms

Resolution	**640 x 512**
Ultra Low Power	**<2.5W**
Optical Interface	**C-mount**
Wavelength Range	**VIS-SWIR**

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Specification for Owl 640 M

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.68mm
Spectral response[1]	0.6 to 1.7µm
Readout Noise (RMS)[2] LG = Low Gain HG = High Gain	LG: <190e- (174e- typical) HG: <50e- (38e- typical)
Peak Quantum Efficiency	>90% @ 1.3µm
Full Well Capacity	LG: 650ke- HG: 9ke-
Pixel Operability	>99.5%
Output Format	14 bit Camera Link (base configuration)
Exposure time[3]	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	Up to 120Hz
Dynamic Range (Typical)	LG: 72dB, HG: 49dB
Optical Interface	C mount
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±0.5V
TE Cooling	None
Image Correction	3 point NUC (offset, gain and dark current) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non-Uniformity Correction, Gamma, Pk/Av, ALC ROI
Camera Power Consumption[4]	<2.5W (NUC ON)
Operating Case Temperature[5]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions (L*W*H)[6]	62.21mm x 42.00mm x 42.00mm
Weight	170g

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Ordering Information

Camera

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

Optional Accessories

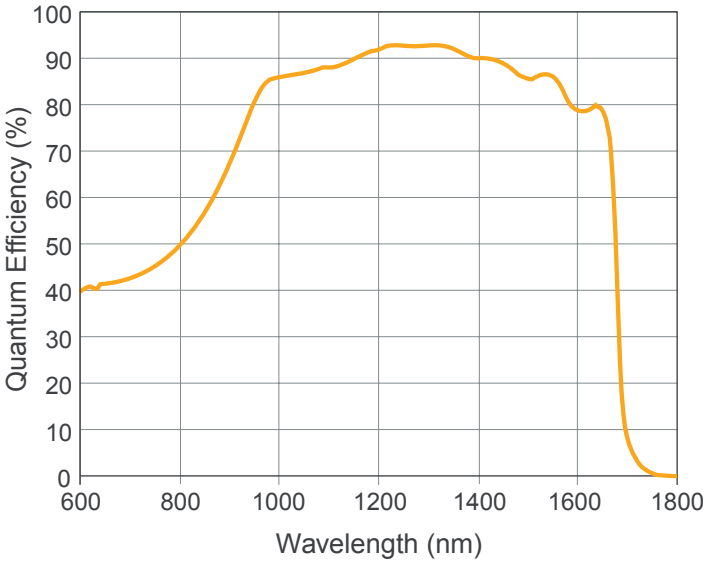
Mini PC with XCAP STD and frame grabber	RPL-PC-mf2280
Thunderbolt frame grabber	RPL-mf2280
EPIX® EB1 frame grabber	RPL-EPIX-EB1
EPIX® XCAP Std software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[7]	RPL-MCL-CBL-2M
Optical Lenses[8]	RPL-xx-xxxx

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: In practice, the maximum exposure time will be dark current limited.
Note 4: Measured in an ambient of 25°C with adequate heat 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

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
- Hand Held Systems
- Vision enhancement
- Machine vision
- Beam profiling

Scientific

- CubeSat / LEO applications
- Beam profiling
- Semiconductor inspection
- Solar panel cell inspection

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