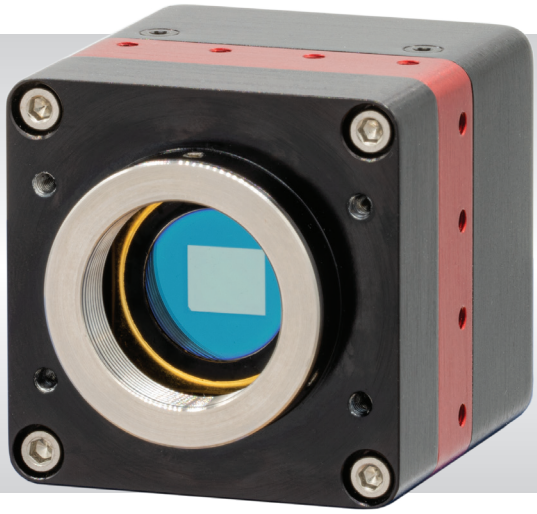
Owl 640 II

Low noise, digital VIS-SWIR camera
640 x 512 • 15µm x 15µm Pixel Pitch • Frame rate up to 120 Hz •



Key Features and Benefits

The best performing VIS-SWIR camera in the World!

- **VIS-SWIR technology**
  Compatible with VIS-SWIR illuminators, markers & pointers
- **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
- **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	**36 electrons**
Wavelength Range	**VIS-SWIR**

Raptor photonics

www.raptorphotonics.com

Specification for Owl 640 II

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]	0.6µm to 1.7µm
Readout Noise (RMS)[2] LG = Low Gain HG = High Gain	LG: <190e- (174e- typical) HG: <50e- (36e- typical)
Peak Quantum Efficiency	>90% @1.3µm
Full Well Capacity	LG: 650ke- 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	LG: 71dB 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]	<8W with TEC ON, NUC ON
Operating Case Temperature[7]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions (L*W*H)[8]	69.4mm x 50.00mm x 50.00mm
Weight	282g

Ordering Information

Camera

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

Optional Accessories

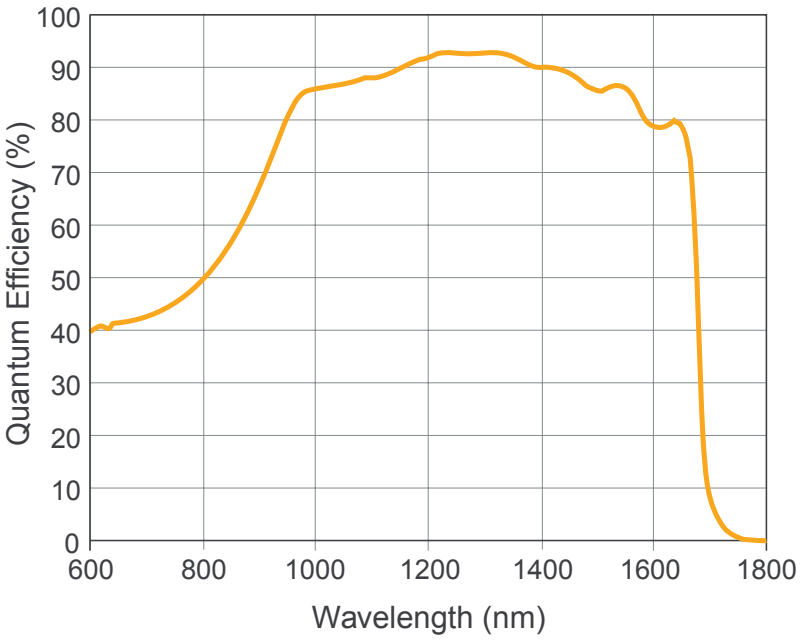
Mini PC with XCAP STD and frame grabber	RPL-PC-mf2280
Thunderbolt frame grabber	RPL-mf2280
EPIX® EB1 Frame Grabber	RPL-EPIX-EB1
EPIX® XCAP Std software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[9]	RPL-MCL-CBL-2M
Optical Lenses[10]	RPL-xx-xxxx

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: Dark current provided for information and is not official specification.
Note 4: In practice, the maximum exposure time will be dark current limited.
Note 5: Other mounts on request.
Note 6: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.
Note 7: Extended operating temperature range on request.
Note 8: Dimensions include all connector parts on the camera interface.
Note 9: Longer Camera Link cable available.
Note 10: 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 Systems
- Imaging through Fog
- Range Finding
- Vision enhancement

Scientific

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

Document #: INOWL1.7-VS-CL-640-II 0322

Raptor photonics

Willowbank Business Park
Larne, Co Antrim
BT40 2SF,
Northern Ireland

Raptor Photonics Ltd. (UK)
T: +44(0)2828 270 141
E: sales@raptorphotonics.com
www.raptorphotonics.com

Raptor Photonics Inc. (USA)
T: +1 (877) 230-4836
E: sales@raptorphotonics.com
www.raptorphotonics.com