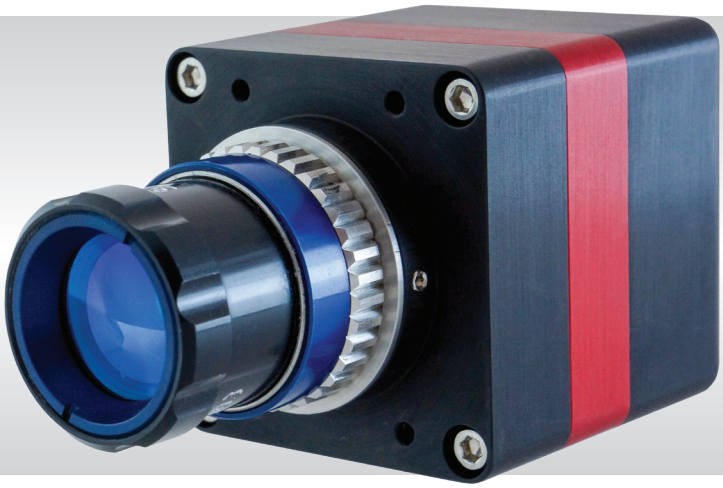
Owl 640 N

Ultra low noise, digital VIS-SWIR camera,
640 x 512 • 15µm x 15µm Pixel Pitch • 18 electrons •



PRELIMINARY

Key Features and Benefits

The best performing VIS-SWIR camera in the World!

- **Ultra low noise sensor**
  Enables ultimate night vision VIS-SWIR image
- **VIS-SWIR technology**
  Compatible with VIS-SWIR illuminators, markers & pointers
- **15µm x 15µm pixel pitch**
  Enables highest resolution VIS-SWIR image
- **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	**18 electrons**
Wavelength Range	**VIS-SWIR**

Raptor photonics

www.raptorphotonics.com

Specification for Owl 640 N

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.2mm
Spectral response[1]	0.4µm to 1.7µm
Noise (RMS) LG = Low Gain HG=High Gain	LG: <175e- (150e- typically) HG: <22e- (18e- typically)
Peak Quantum Efficiency	>90% @1.3µm
Pixel Well Depth	Low Gain: 650ke-, High Gain: 10ke-
Pixel Operability	>99.5%
Digital Output Format	14 bit CameraLink (Base Configuration)
Exposure Time	1µs to 1 / frame rate
Shutter Mode	Global shutter
Frame Rate	Up to 120Hz programmable, 25ns resolution
Dynamic Range (Typical) LG = Low Gain HG=High Gain	LG: 73dB HG: 55dB
Optical Interface	C mount
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±10%
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, ROI
Camera Power Consumption[2]	<4W (TEC ON, NUC ON)
Operating Case Temperature[3]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions (L*W*H)[4]	90.93mm x 50.00mm x 50.00mm
Weight	250g

Ordering Information

Camera

Owl 640 N Digital Camera	NO1.7-VS-CL-640
OWL Power Supply Cable	RPL-HR4-K

Optional Accessories

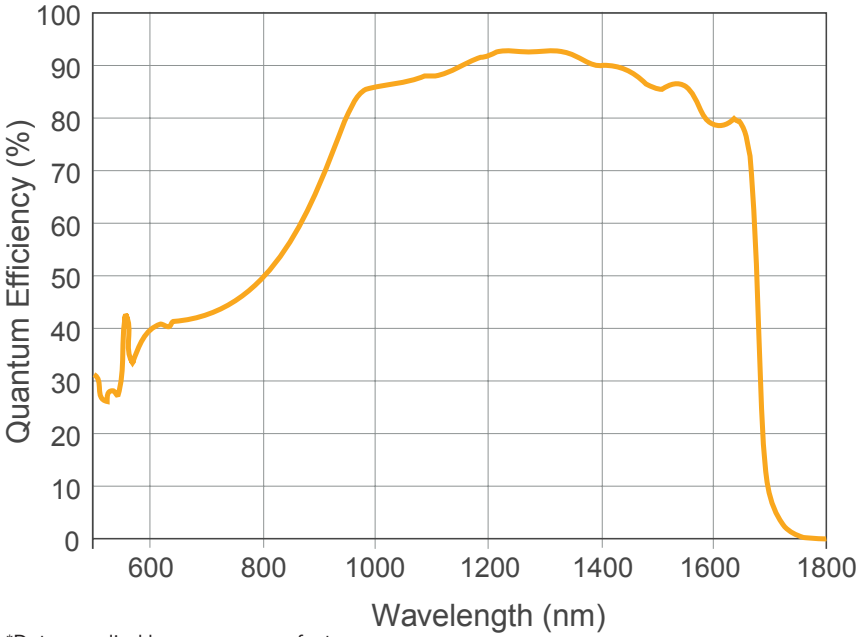
EPIX(R) base CL card	RPL-EPIX-EB1
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m[5]	RPL-MCL-CBL-2M
Optical SWIR lenses[6]	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass
Note 2: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.
Note 3: Extended Operating Temperature range on request
Note 4: Dimensions include all connector parts on camera interface
Note 5: Longer CL cable available
Note 6: 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 #: INNO1.7-VS-CL-640 0120

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