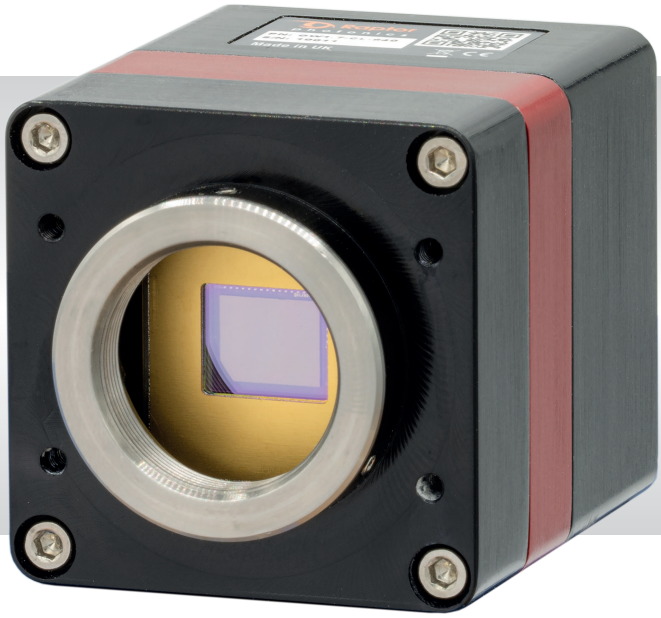
Owl 640 S

High Speed, low noise, digital SWIR camera
640 x 512 • 15µm x 15µm Pixel Pitch • Frame rate up to 300Hz •



Key Features and Benefits

The best performing SWIR camera in the World!

- **High Speed - up to 300Hz**
  Perfect for high speed imaging applications
- **SWIR technology**
  Enables imaging from 0.9µm to 1.7µm
- **15µm x 15µm pixel pitch**
  Enables highest resolution 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 300Hz**
Readout noise	**<30e-**
Wavelength Range	**SWIR**

Raptor photonics

www.raptorphotonics.com

Specification for Owl 640 S

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]	0.9µm to 1.7µm
Readout Noise (RMS) on camera LG = Low Gain HG = High Gain	HG: <56e- (Typical <50e-) LG: <98e- (Typical <85e-)
Readout Noise (RMS) on ROIC	HG: <30e-
Peak Quantum Efficiency	80% @ 1.5µm
Full Well Capacity	Low Gain: >110ke-, High Gain: >35ke-
Pixel Operability	99%
Dark Current	300k e/p/s @15°C (130k typical)
Digital Output Format	12 bit Camera Link (Medium Configuration)
Exposure time[2]	14µs to (frame period - readout time)
Shutter mode	Global shutter
Frame Rate	Up to 300Hz
Optical Interface	C mount
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, TEC, frame rate
Camera Power Consumption[3]	8W (TEC ON, NUC ON)
Operating Case Temperature[4]	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H)[5]	74.2mm x 50.00mm x 50.00mm
Weight	260g

Ordering Information

Camera

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

Optional Accessories

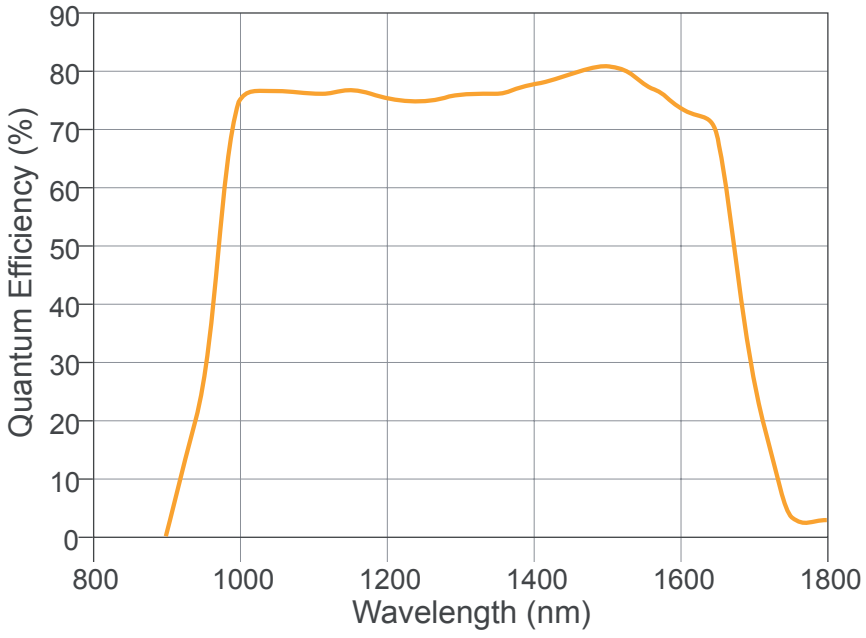
Mini PC with XCAP STD and frame grabber	RPL-PC-mf2280
Thunderbolt frame grabber	RPL-mf2280
EPIX® E8 Frame Grabber	RPL-EPIX-E8
EPIX® XCAP Std software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[6]	RPL-MCL-CBL-2M
Optical SWIR lenses[7]	RPL-xx-xxxx

Note 1: Optional filters available.
Note 2: Maximum exposure time will be dark current limited.
Note 3: Measured in an ambient of 25°C with adequate heat sinking.
Note 4: Extended operating temperature range on request.
Note 5: Dimensions include all connector parts on the camera interface.
Note 6: Two cables required.
Note 7: 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



Applications

Surveillance

- 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

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