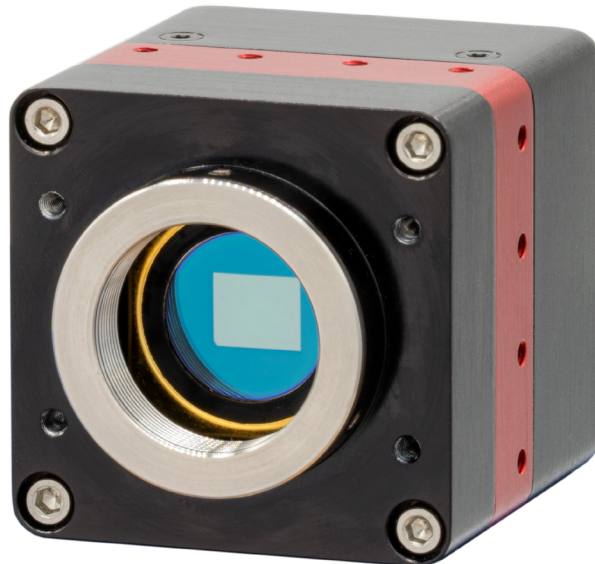


Owl 640 S

640 x 512, SWIR Camera



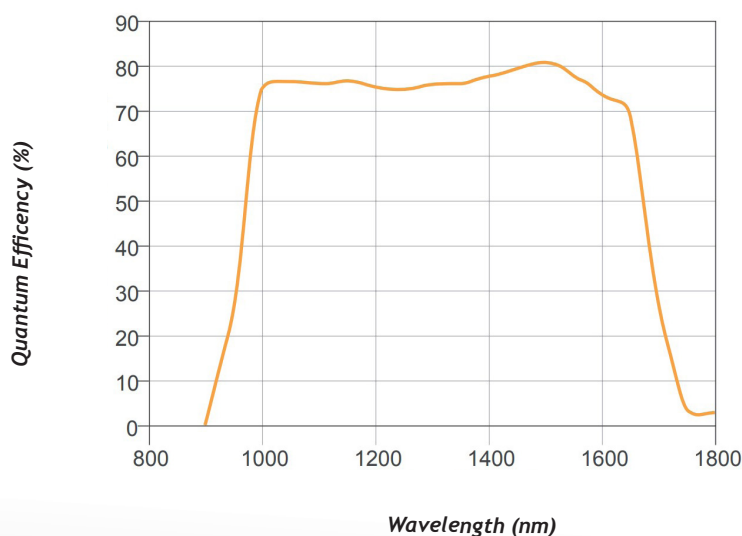
Key Features and Benefits

- **640 x 512 , 15 μ m pitch VIS-SWIR sensor**
HD resolution imaging from 0.9 μ m to 1.7 μ m
- **On-board Intelligent 3 point NUC and ALC**
Real time, optimal video in all light conditions
- **Designed for Harsh environments**
High Shock, Vibration and extreme Temperature resistance
- **Global Shutter**
300Hz full frame video, with no distortion (ideal for triggering)
- **Low Noise Electronics**
No artificial noise added, optimising low light capability

Resolution	640 x 512
Frame Rate	up to 30.2KHz
Camera Link	12 bit medium
Wavelength Range	SWIR

Specification for Owl 640 S

Sensor	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)	HG: <56e- (50e- typical) LG: <98e- (85e- typical)
Peak Quantum Efficiency	>80% @1.5µm
Full Well Capacity	HG: >35ke- LG: >110ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	300k e/p/s @ 15°C (130k typical)
Digital Output Format	12 bit Camera Link (Medium Configuration)/ SDR
Dynamic Range	HG: >55.9dB LG: 61dB
Exposure Time ²	15µs to frame period in IWR
Shutter Mode	Global Shutter
Frame Rate	300Hz in full resolution 30.2kHz with 32x4 binning
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, Gamma, Pk/Av, TEC, ALC, ROI
Camera Power Consumption ³	<8W with TEC ON, NUC ON
Operating Temperature ⁴	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (excluding standard mounting) ⁵	74.2mm x 50.00mm x 50.00mm
Weight	260g



*Data Supplied by Sensor Manufacturer

Specification for Owl 640 S

Camera

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

Optional Accessories

Mini PC with XCAP STD and Frame Grabber	RPL-PC-mf2280
Thunderbolt Frame	RPL-mf2280
EPIX® E8 Frame Grabber	RPL-EPIX-E8
EPIX® XCAP STD Software	RPL-XCAP-STD
MDR-SDR CameraLink Cable ⁶ (2m)	RPL-MCL-CBL-2M
Optical SWIR lenses ⁷	RPL-xx-xxx

Applications

Surveillance

- 860,1064 & 1550nm laser line detection
- Active Imaging
- Airborne Payload
- Handheld Systems
- Imaging through Fog
- Range Finding
- Vision Enhancement

Scientific

- Astronomy
- Beam Profiling
- Hyperspectral Imaging
- Semi Conductor Inspection
- Solar Cell Inspection
- Thermography

Resolution	Speed (Hz) ⁸
640 x 512	300
320 x 256	903
32 x 32	10,489
32 x 4	30,200

For detailed technical drawings, volume pricing or to set up a demo, contact us at sales@raptorphotronics.com

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