

Analogue & Rugged High Sensitivity SWIR camera.

Description:

The Raptor Owl SW1.7 CL-320 Short Wave Infra-Red (SWIR) camera utilises InGaAs PIN-Photodiode sensor technology. This enables high sensitivity imaging from $0.9\mu\text{m}$ to $1.7\mu\text{m}$ operating at up to 60Hz. A high speed 346 Hz full frame and analog versions are also available.

SeeSense are an official distributor for Raptor Photonics products. Please contact SeeSense for full details of the Raptor Photonics range and for lens options for the Raptor SW1.7 cameras.

Raptor's SWIR camera cores are ideally suited for cutting edge applications such as:

- 1.55 μm laser line detection
- Range finding
- Active Imaging
- Perimeter surveillance
- Camouflage detection
- Imaging through fog
- Vision enhancement
- Semiconductor inspection
- Astronomy
- Airborne EO and UAV Systems

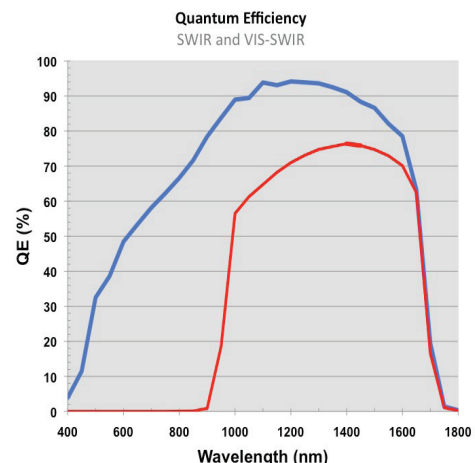


Model and lens used for illustration purposes only



Specifications:

- Short Wave Infra-Red (SWIR) technology enabling high sensitivity imaging from $0.9\mu\text{m}$ to $1.7\mu\text{m}$.
- 320 x 256 InGaAs PIN-Photodiode sensor.
- Optional Visible extension enables high sensitivity imaging from $0.4\mu\text{m}$ to $1.7\mu\text{m}$
- On-board Automated Gain Control (AGC) enables clear video in all light conditions.
- On-board intelligent 3 point NUC for high quality images.
- 14 bit CameraLink for high speed digital video output with intelligent AGC.
- Easy control of camera parameters. Control of Exposure, Gamma, intelligent AGC, etc.
- 500ns minimum exposure ideal for active imaging applications.
- C-mount (selection of SWIR lenses available).
- Compact and lightweight (approx. 50 x 50 x 82mm).
- Weight <285 g. (excluding lens).
- Low power (< 5W). Ideal for hand-held, mobile or airborne systems.
- Rugged, No fan. Enables integration into UAV, hand-held or any Electro-Optic systems.



SeeSense are able to provide full technical assistance and back up for this camera as well as offering additional accessories and lens advice. Please contact SeeSense for details and advice.

Rev: 2.018.0412 E&O.E.

Sensor Specification

Image Sensor	Alcatel-Thales III-V Lab
Sensor Type	InGaAs PIN-Photodiode
Active Pixels	320 x 256 (higher resolution option coming)
Pixel Size	30µm x 30µm
Active Area	9.6mm x 7.68mm
Spectral response	0.9mm to 1.7mm or 0.4mm to 1.7mm
Noise (RMS)	<150 electrons
Quantum Efficiency	>70% @ 1.5µm
Pixel Operability	>99.5%

Camera Specification

Digital Output Format	14 bit CameraLink (Base Configuration)
Exposure Time	500ns to 1/frame rate
TE Cooling (TEC)	ON / OFF
Dynamic Range	14 bit
Trigger interface	Trigger IN and OUT - TTL compatible
Image Correction	3 point NUC (Offset, Gain & Dark Current) & pixel correction
Frame Rate	25Hz, 30Hz, 50Hz or 60Hz

Functions controlled by

Serial communication	Exposure, intelligent AGC, Non Uniformity Correction, Gamma, Pk/Av, TEC & ROI
Lens Mount	C-mount 17.526mm (in Air) Selection of SWIR lenses available
Camera Setup/ Control	CameraLink
Power Requirements	12 VDC \pm 10%
Power Consumption	<5 watts (<10 watts with TEC on)
Dimensions	50 x 50 x 82mm
Weight	285 grammes
Operating Temperature	-20°C to + 55°C
Storage Temperature	-30°C to + 60°C

Camera Options

OW1.7-CL-320	OWL SWIR digital camera
OW1.7-VS-CL-320	OWL Visible SWIR digital camera
OW1.7-CL	OWL High Speed SWIR digital camera
OW1.7-A	OWL SWIR analogue camera
OW1.7-VS-A	OWL Visible SWIR analogue camera

Recommended Accessories:

Lenses

The following lenses (a small selection only) are known to be compatible with this camera.

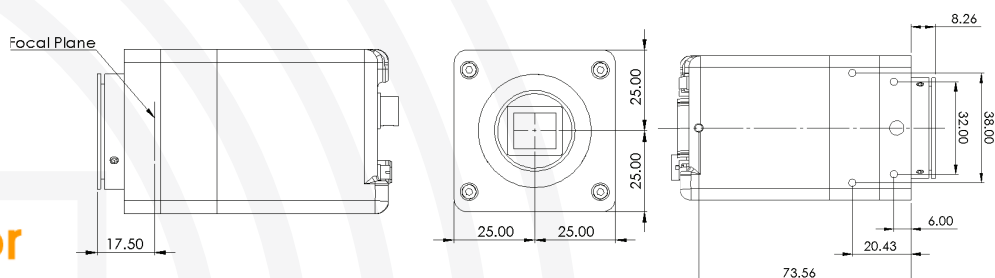
RPL-KW-LM8HC-SW	Kowa 8mm F1.4 SWIR lens
RPL-KW-LM12HC-SW	Kowa 12mm F1.4 SWIR lens
RPL-KW-LM16HC-SW	Kowa 16mm F1.4 SWIR lens
RPL-KW-LM25HC-SW	Kowa 25mm F1.4 SWIR lens
RPL-KW-LM35HC-SW	Kowa 35mm F1.4 SWIR lens
RPL-KW-LM50HC-SW	Kowa 50mm F1.4 SWIR lens
RPL-OB-C0628.001	Optec 75-500mm F6.0 SWIR zoom lens
RPL-OB-C0628.020	Motion controller for 75-500mm zoom
RPL-OB-B9930.002	Optec 200mm F2.4 SWIR lens
RPL-OB-B0245.002	Optec 300mm F3.5 SWIR lens
RPL-OB-C0615.001	Optec 500mm F7.0 SWIR lens (no iris)
RPL-OB-C0615.002	Optec 500mm F7.0 SWIR lens (iris)

If you have a specific lens requirement please contact SeeSense.

Accessories

RPL-OW-D-CBL	OWL power supply cable
RPL-EPIX-EB1	EPIX base CL card
RPL-EPIX-ECB1-54	EPIX base notebook CL card
RPL-XCAP-LTD	EPIX Xcap Ltd software
RPL-CL-CBL-2M	CameraLink 2 metre cable (others available)

Contact SeeSense for details and advice.



Rev: 2.018.0412 E&O.E.