Owl 640 VIS SWIR Digital

High resolution, low noise, digital VIS-SWIR camera,
640 x 512 • Frame rate up to 120 Hz • VIS-SWIR technology •

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 [6]	**39 electrons**
Wavelength Range	**VIS-SWIR**

Raptor photonics

www.raptorphotonics.com

Specification for Owl 640 VIS-SWIR Digital

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 480 (EIA) / 640 x 512 (CCIR)
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.2mm
Spectral response[1]	0.4µm to 1.7µm
Noise (RMS)	<195 electrons Low Gain (176 electrons typical), <50 electrons High Gain (39 electrons typical)
Quantum Efficiency	Peak >85% (>73% @ 1.064µm, 78% @ 1.55µm)
Pixel Well Depth	Low Gain: 650Ke-, High Gain: 15Ke-
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
Optical Interface	C mount or M42
Camera Setup / Control	RS 485
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]	< 3.5W (TEC OFF, NUC ON) <4W (TEC ON in ambient, NUC ON)
Operating Case Temperature[3]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions & Weight	50mm x 50mm x 82mm / 282g

Ordering Information

Camera

OWL SWIR digital camera C-Mount	OW1.7-VS-CL-640
OWL SWIR digital camera M42 Mount	OW1.7-VS-CL-640-M42
OWL Power Supply Cable	RPL-HR4-K

Optional Accessories

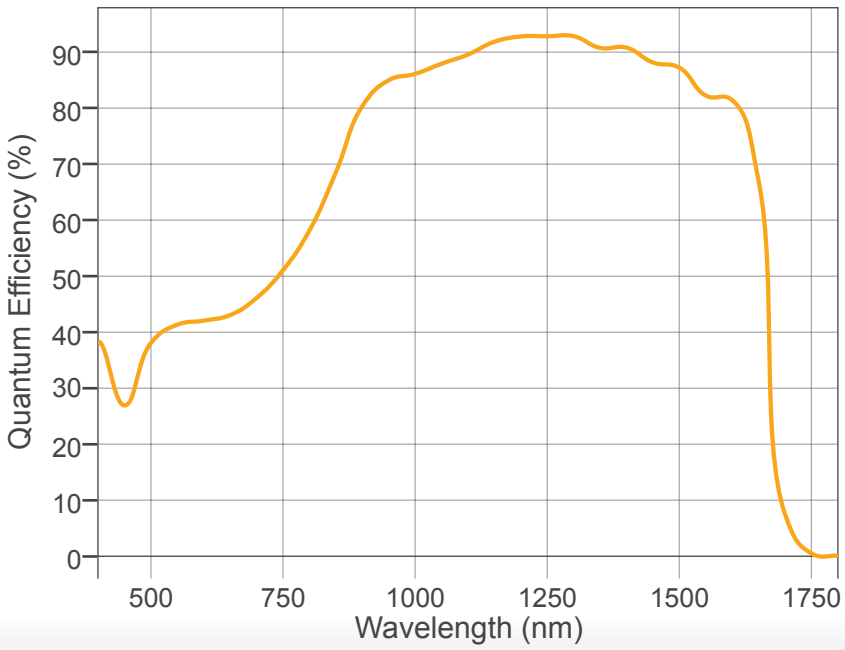
EPIX(R) base CL card	RPL-EPIX-EB1
EPIX(R) base notebook CL card	RPL-EPIX-ECB1-34
EPIX(R) base notebook CL card	RPL-EPIX-ECB1-54
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m[4]	RPL-CL-CBL-2M
Optical SWIR lenses[5]	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass
Note 2: Measured @ 30˚C
Note 3: Extended Operating Temperature range on request
Note 4: Longer CL cable available
Note 5: Please consult us to check our range of lenses
Note 6: Typical value

Demo is available on request.
Pricing AOR subject to volumes.

Detailed technical drawings can be downloaded at www.raptorphotonics.com

Quantum Efficiency



Applications

Surveillance

- 860, 1064 & 1550nm laser line detection
- Active Imaging
- Airborne Payload
- Hand Held Goggles
- Imaging through Fog
- Range Finding
- Vision enhancement

Scientific

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

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