Owl 640 A

Low noise, VIS-SWIR camera
640x512 • 15µm x 15µm Pixel Pitch • CCIR/EIA •

Analogue

Key Features and Benefits

Cooled VGA Surveillance Analogue InGaAs Camera

- **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**
Analogue output	**CCIR / EIA**
Readout noise	**36 electrons**
Wavelength Range	**VIS-SWIR**

Specification for Owl 640 A

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 7.68mm
Spectral response[1]	0.6µm to 1.7µm
Readout Noise (RMS)[2] LG = Low Gain HG = High Gain	LG: <190e- (174e- typical) HG: <50e- (36e- typical)
Peak Quantum Efficiency	>90% @ 1.3µm
Full Well Capacity	LG: 650ke- HG: 10ke-
Pixel Operability	>99.5%
Analogue Output Format	CCIR / EIA
Exposure time	10µs to (Frame Period -Readout Time)
Shutter mode	Global shutter
Frame Rate	25Hz (CCIR) / 30Hz (EIA)
Optical Interface[3]	C mount
Dynamic Range (typical)	LG: 71dB HG: 49dB
Camera Setup / Control	RS 485
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, NUC, Gamma, Pk/Av, TEC,
Camera Power Consumption[4]	<6W with TEC ON, NUC ON
Operating Case Temperature[5]	-20˚C to +55˚C
Storage Temperature	-30˚C to +60˚C
Dimensions (L*W*H)[6]	76.23mm x 50.00mm x 50.00mm
Weight	282g

Ordering Information

Camera

Owl 640 A analogue-CCIR	OW1.7-VS-AC-640
Owl VIS-SWIR analogue-EIA	OW1.7-VS-AE-640
Power Supply Cable	RPL-MDM-CBL-B

Optional Accessories

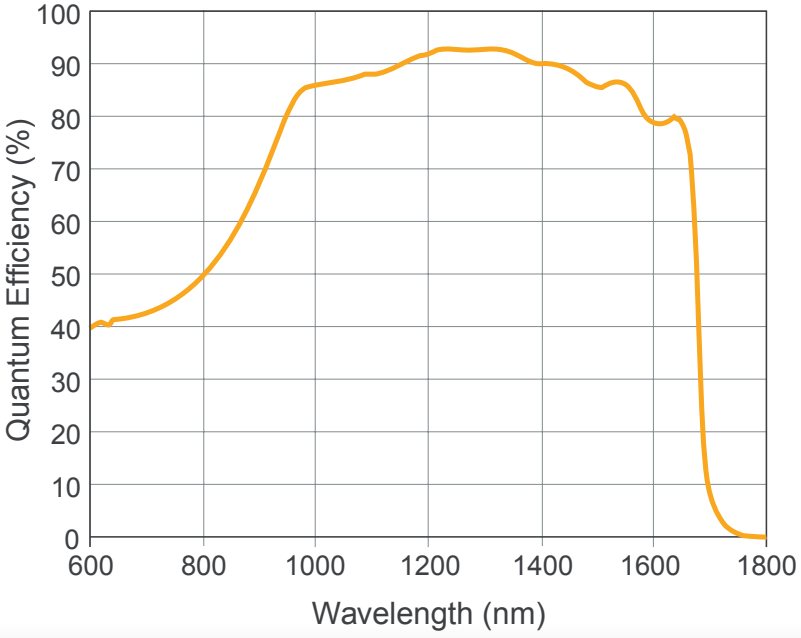
EPIX® Analogue video card	RPL-EPIX-SV5
Owl/Hawk PSU cable MDM to Jack + brick	RPL-MDM-CBL-J
Owl/Hawk PSU cable MDM to flying leads	RPL-MDM-CBL-F
Optical Lenses[7]	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass.
Note 2: Typical readout noise is calculated from an average of the last 20 cameras shipped.
Note 3: Other mounts on request.
Note 4: Measured in an ambient of 25°C with adequate heat sinking. For more detailed power consumption values, please refer to the user manual.
Note 5: Extended operating temperature range on request.
Note 6: Dimensions include all connector parts on the camera interface.
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



*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
- Maritime / Coastal surveillance
- UAV

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