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]	0.4µm to 0.6µm
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

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.

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

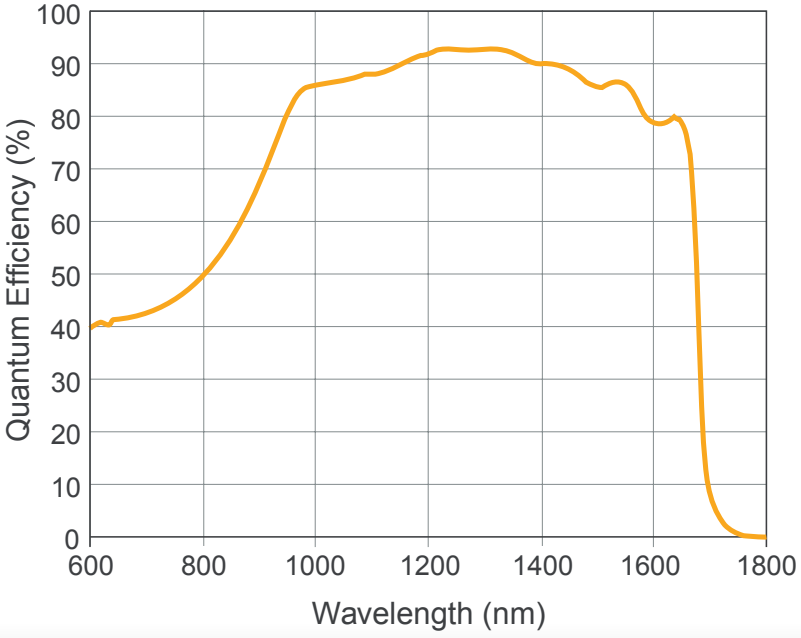
EPIX® Analogue video card	RPL-EPIX-SV5
Owl/Hawk PSU cable MDM to Jack + brick	RPL-MDM-CBL-J
Owl/Hawk PSU cable MDM to flying leads	RPL-MDM-CBL-F
Optical Lenses[7]	RPL-xx-xxxx

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

Document #: INOWL1.7-VS-AC / AE 0322

Raptor photonics

Willowbank Business Park
Larne, Co Antrim
BT40 2SF,
Northern Ireland

Raptor Photonics Ltd. (UK)
T: +44(0)2828 270 141
E: sales@raptorphotonics.com
www.raptorphotonics.com

Raptor Photonics Inc. (USA)
T: +1 (877) 230-4836
E: sales@raptorphotonics.com
www.raptorphotonics.com

nqa ISO 9001 QUALITY MANAGEMENT
UKAS MANAGEMENT SYSTEMS 0015