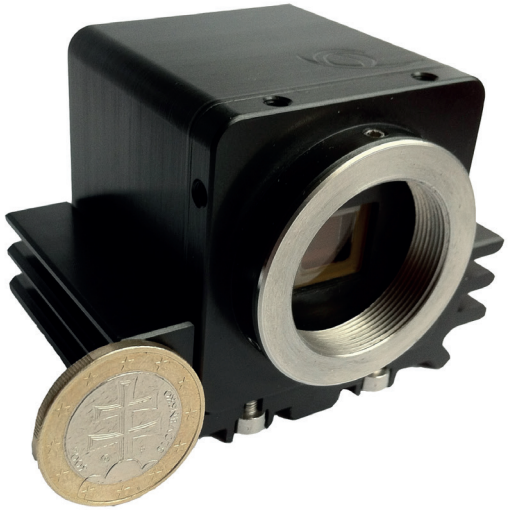
SeeSense
Miniature Camera Solutions

Hawk HK-247

Raptor photonics



Specifications:

- Analogue Monochrome EM-CCD camera
  - PAL HK247-AP
  - NTSC HK247-AN
  - Cameralink HK247-CL
- B/W EM-CCD technology
  - Enables high sensitivity imaging (<200µlux)
  - Up to 1000x on-chip gain
- Good Quantum Efficiency
  - Gen II image intensifier performance
- Interline Frame Transfer
  - No mechanical shutter, vibration free CCD readout
- Image sharpness in ALL light conditions
- No image intensifier and No fan
- Ultra compact & Ultra Low power (<4.5W)
- Compact (44 x 44 x 57mm) one-piece system
- Realtime imaging
- Simple operation

The Raptor Hawk HK-247 utilises black & white 1/2" EM-CCD sensor technology.

This permits high sensitivity imaging (<200 µlux scene illumination) comparable to an Image Intensifier but capable of 24 hour operation.

SeeSense are an official distributer for Raptor Photonics products and are able to provide full technical assistance backed directly by the manufacturer.

SeeSense also offer additional accessories and expert lens advice. Please contact us for full details of their range and for lens options for the Raptor HK-247.

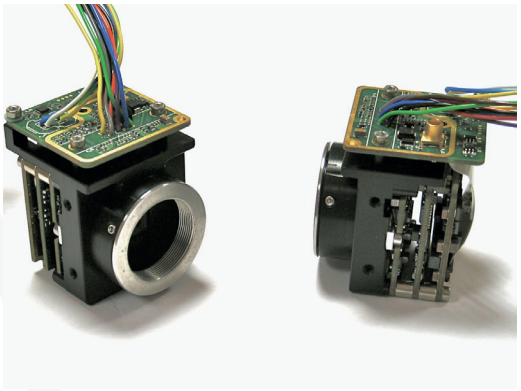
Availalable in three versions:

Analogue CCIR	**HK247-AP**
Analogue EIA	**HK247-AN**
Cameralink	**HK247-CL**

Please contact SeeSense for details and advice.

Raptor's EM-CCD camera cores are ideally suited for cutting edge day & night passive surveillance or any low light imaging application including:

- Ground Based Surveillance, Border Control, etc
- Airborne Surveillance
- Long Range Target Identification
- 860nm & 1064nm laser line detection
- Scientific Spectral (Hyperspectral) Imaging, etc
- Industrial Low Light Imaging
- Ideal for OEM integration into:
  EO, UAV, Handheld or Robotic systems



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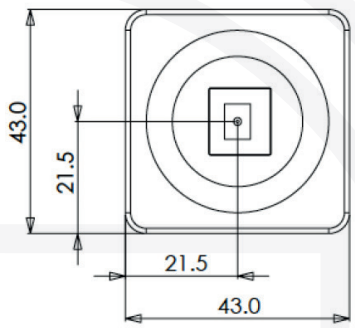
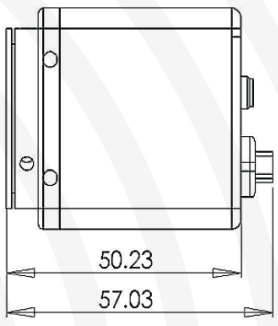
Specification Performance

Power Requirements	12 VDC ± 10% MDM connector
Power Consumption	Analogue <4.5 watts Camlink <5watts
Image Sensor	1/2"Interline Frame Transfer Impactron
Sensor Type	Texas Instruments TC247SPD-B0
Active Pixels / Resolution	658 x 496
Frame Rate	25Hz (CCIR), 30Hz (EIA) 25Hz, 29.97Hz or 30Hz (Cameralink)
Active Area	6.58mm x 4.96mm
Pixel Size	10µm x 10µm
Resolution	450 TV lines
Exposure Time	500µs to 1/50s (CCIR) or 1/60s (EIA) 500µs to 1/frame rate (Cameralink)
Syncronisation (Camlink Only)	Trigger Un and Out - TTL compatible
Functions controlled by serial communication (Camlink Only)	Exposure, EM Gain, Hot Pixel Correction, Gamma, Intelligent AGC
Readout Mode	Progressive Scan
Cooling	Active, no fan
Antiblooming Protection	Yes (>500:1)
Minimum Illumination	< 200 µlux
Dynamic Range	55 dB
Spectral Range	350 – 1100 nm
Video Signal Output	1.0Vp-p, 75Ω, CCIR or EIA SMA connector with BNC adapter 12 bit Cameralink (base configuration)
Lens Mount	C/CS-mount 17.526mm / 12.5mm (in Air) Back focus capable
Iris Control	Autosensing Video / DC (Camlink N/A)
Dimensions	43 x 43 x 57mm (Including CS-mount)
Weight	<150 grammes
Operating Temperature	-20°C to + 55°C
Storage Temperature	-30°C to + 85°C





Accessories

RPL-MDM-CBL-F	MDM connector with flying leads
RPL-MDM-CBL-J	MDM connector to Jack & brick
RPL-CL-CBL-2M	2 metre Cameralink Cable
RPL-EPIX-SV5	Analogue to Video Frame Grabber
RPL-EPIX-EB1	EPIX(R) base Cameralink card
RPL-EPIX-ECB1-34	EPIX(R) base notebook Camerlink card
RPL-XCAP-STD	EPIX(R) XCAP software
RPL-MDM-CBL-B	Hawk EM247 Analogue Power Supply
RPL-HR4-K	Hawk EM247 Digital Power Supply

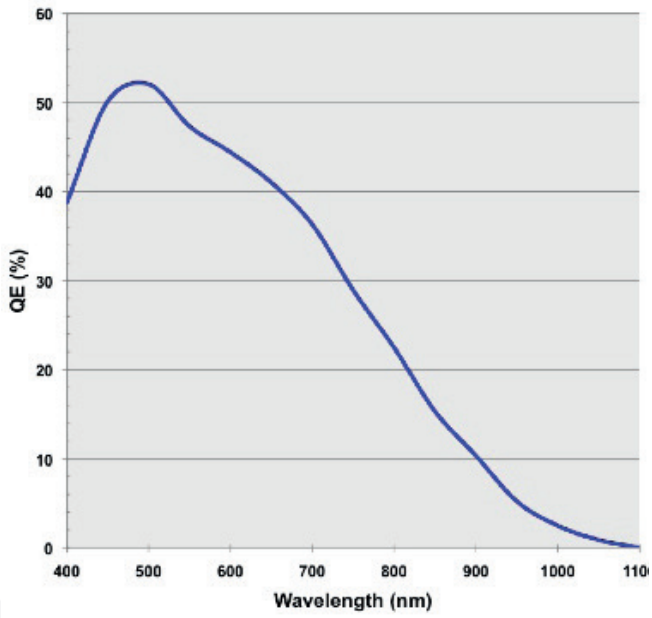
Power Connector

HK247-AP / AN HK-247-CL	MDM Type Hirose HR10-7P-4S
	Available from SeeSense

Lenses

SeeSense specialise in the specification and supply of C & CS-mount lenses.
Contact SeeSense for details and advice.

Camera Quantum Efficiency @ 20°C



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