Raptor photonics

Hawk 1920 Flight Ready

1920 x 1080, Monochrome & Colour CMOS Camera



Preliminary

Key Features and Benefits

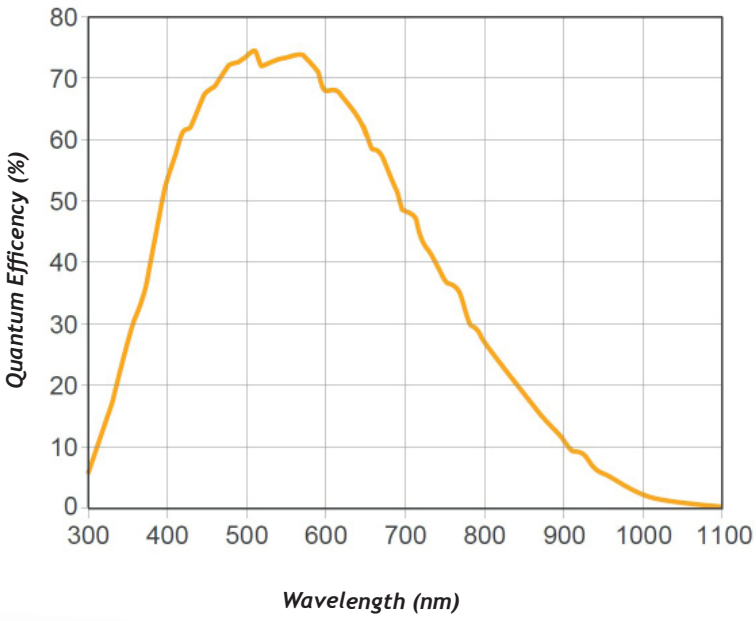
- **1920 x 1080, 4.5µm pitch CMOS sensor**
  Full HD resolution imaging from 0.3µm to 1.1µm
- **Ultra compact and ruggedised for space**
  Easy integration in space optical instruments
- **On-board Automatic Light Control (ALC)**
  Real time, optimal video in all light conditions
- **Designed for LEO environments**
  High Shock, Vibration and Extreme Temperature Resistance
- **Global shutter CMOS technology**
  Colour or monochrome image without any geometric distortion
- **Low Noise Electronics**
  No artificial noise added, optimising low light capability

Resolution	1920 x 1080
Frame Rate	60Hz
Dynamic Range	72dB
Peak QE	77% @ 530nm

Specification for Hawk 1920 FR

Sensor	2/3" CMOS	
Active Pixel	1920 x 1080	
Pixel Size	4.5µm x 4.5µm	
Active Area (Diagnoal)	8.75mm x 6.62mm (11mm)	
Frame Rate	***Mono*** 60Hz (Max)	***Colour*** 25Hz
Dynamic Range	72dB	
Readout Noise	1.5e-	
Anti-blooming	Yes	
Spectral Response	300-1100nm (monochrome)	
Non-Linearity	<1%	
Total Power Consumption	<5W	
Peak QE[1]	77% @ 530nm	
Output Format	***Mono*** 12 bit Camera Link (base configuration)	***Colour*** 8 bit Camera link (base configuration)
Synchronization	Trigger In & OUT - TTL compatible	
Trigger Connectors	SMA Type	
Cooling	Uncooled	
Lens Mount	C Mount, back focus capability	
Power Connector	Hirose part code HR10A-7R-4PB	
Power Supply	12V DC ± 0.5%	
Operating Temperature	-40°C to +71°C	
Storage Temperature	-55°C to +85°C	
Dimensons (excluding standard mounting)[2]	48mm x 43mm x 43mm	
Weight	167g	

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictoral or typographical errors.Note 1: Peak QE quoted from sensor manufactuer. Note 2: Dimensions include all connector parts on the camera interface. Note 3: Please consult us to check our range of lenses



Data Supplied by Sensor Manufacturer

Specification for Hawk 1920 FR

Camera

Hawk 1920 Mono Camera FR	HK1920-CL-S
Hawk 1920 Colour Camera FR	HK1920-CL-C-S
Hawk 1920 Digital PSU	RPL-HR4-K

Optional Accessories

Mini PC with XCAP STD and Frame Grabber	RPL-PC-mf2280
Thunderbolt Frame	RPL-mf2280
EPIX® EB1 Frame Grabber	RPL-EPIX-EB1
EPIX® XCAP STD Software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[3]	RPL-MCL-CBL-2M

Lenses

Optical Visisble & CCTV day/night lenses[5]	RPL-xx-xxxx

Custom Options

Custom Options available, contact us at sales@raptorphotonics.com

Applications

Scientific

- New Space LEO
- Free Space Optical Communication
- Hyperspectral Imaging
- Astronomoy

For detailed tehnical drawings, volume pricing or to set up a demo, contact us at sales@raptorphotonics.com

Document#:HAWK1920-FR-08-26

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