



The Condor⁵ UAV-sCMOS

Applications

- Precision agriculture
- Fire location
- Foliage evaluation
- Oil spill detection
- Terrain mapping

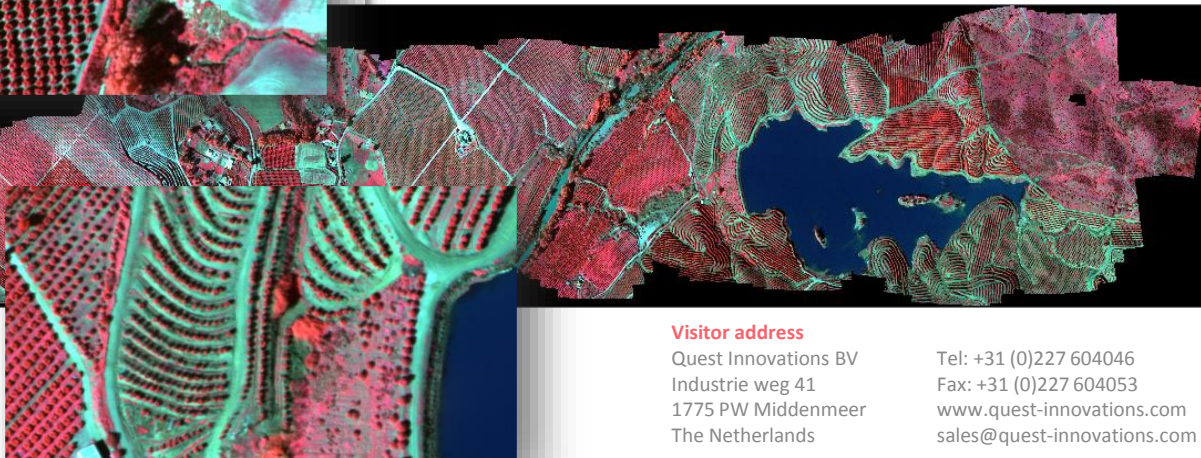
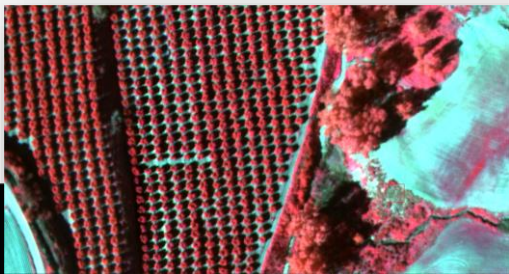
Benefits

- With apochromatically corrected lenses
- Inhouse data storage & optional HDMI out
- High resolution (7.0MP)
- Very sensitive (big pixels)
- Pixel to Pixel co registration of sensors
- Easy stitching & fast processing of images
- GPS triggering & Geo-referencing

World's first 5 Channel Multispectral Imager solving all the needs for UAV data gathering

Unmanned Aircraft Systems (UAS) or Unmanned Aerial Vehicles (UAV) are as effective as the information they can collect. The Quest Innovations multispectral cameras are perfectly equipped to do just that; collect highly qualified information in a high resolution which is fast and easy to process.

Single lens optics result in perfect co-registration of the images. These are easy to stitch to a large mosaic and keeps the precise image size of the images that are taken simultaneously. There is no need to process these simultaneously taken images for shift and deformation artefacts. This increases the post processing speed tremendously as well as improving the scientific data quality. The cameras are equipped with the right narrow band filters, providing unique information from the selected spectral regions. Important success factors of the Quest Innovations cameras are the large pixels and high resolution capabilities.



Visitor address

Quest Innovations BV
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Features

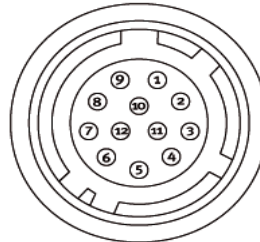
- Individual sensor settings or combined
- Smart Multi sensor trigger capabilities
- Wavelengths: 400 – 1000 nm

Specifications

Sensor	Fairchild CIS1910F
Active area	2/3" sensor
Pixel size	6.45µm x 6.45µm
Pixel clock	48 MHz
Active pixels	7.0MP (1360 x 1024 x 5)
Frame rate	5Fps over GigE / ~20Fps over CL
Channels	Channel 1: 400 – 500 nm or Custom
RGBNirNir Prism or	Channel 2: 500 – 590 nm or Custom
20/20/20/20/20 Beam Split	Channel 3: 590 – 670 nm or Custom
prism	Channel 4: 670 – 830 nm or Custom
	Channel 5: 830 – 1000 nm or Custom
Alignment accuracy	Better than 1/4 th of a pixel
Dynamic range	>70 dB
Bit depths	8 bit 5 channel, 12 bit 5 channel
Gain	X3.2 analog gain + digital gain.
Video output	GigE/ optional External micro-PC with HDMI-out*/ USB 3.0 (in development)
Internal data storage	250GB with Intel Core-i5 Micro-PC
Trigger modes	Internal and external source (on Camera Link and Hirose connectors)
Synchronization	All Sensors clock synchronized. Smart trigger unit for advanced trigger schemes
Electronic shutter	Synchronized exposure with channel independent duration. (1 µs to 1s)
Lookup tables	Lookup tables available in 8bit mode, full access to table entries. Table data can be programmed in flash memory
External control Capability	Gain*, exposure*, lookup tables*, region of interest, image bit depth, trigger source
*Selectable per channel	
Weight	~1450 grams including 50 mm len ~1950 grams including 15 mm len ~ 350 grams extra for Micro-PC
Dimensions	150 x 130 x 177 mm incl 50 mm lens 150 x 130 x 247 mm incl 15 mm lens
Lens mount options	M42 custom lens
Operating temperature	-20 - +50 °C
Regulations	CE (EN 61000-6-2 EN 61000-6-3), FCC Part 15 class B, RoHS/WEE
Back focal length	≥ 59 mm in air
Power	18-24V DC +/-10%, 12W
Humidity	20-90% Non condensing

Connector

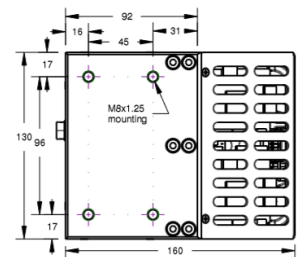
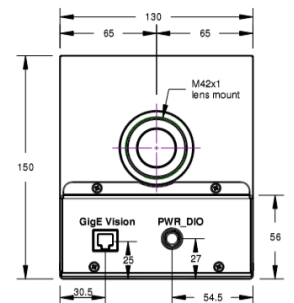
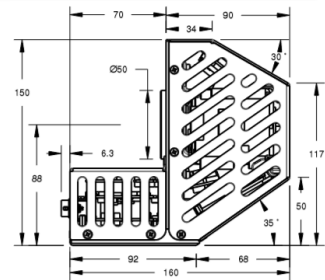
DC-In / Trigger



Hirose HR10A-10P-12S

Pin	Signal	Function
1	GND	GROUND
2	Vin	+15-24V
3	DNC	Do not connect
4	DNC	Do not connect
5	DNC	Do not connect
6	DNC	Do not connect
7	Trigger in	Input trigger
8	Trigger out	Output trigger
9	DNC	Do not connect
10	DNC	Do not connect
11	DNC	Do not connect
12	DNC	Do not connect

Dimensions



High resolution & footprint table

Resolution	Footprint	Resolution element	Resolution element	Resolution element	
15mm Lens					
50m	30,00	x	22,33	m/ image	
	Resolution element	2,16	x	2,15	cm/pixel
100m	60,00	x	44,67	m/ image	
	Resolution element	4,31	x	4,29	cm/pixel
250m	150,00	x	111,67	m/ image	
	Resolution element	10,78	x	10,74	cm/pixel
50mm Lens					
50m	9,00	x	6,70	m/ image	
	Resolution element	0,65	x	0,64	cm/pixel
100m	18,00	x	13,40	m/ image	
	Resolution element	1,29	x	1,29	cm/pixel
250m	45,00	x	33,50	m/ image	
	Resolution element	3,23	x	3,22	cm/pixel

Ordering information

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