SPECIM
SPECTRAL IMAGING

AISAFENIX 1K


FULL SPECTRUM HYPERSPECTRAL DATA WITH 1024 PIXELS REDUCES YOUR FLYING COSTS BY 60 %

AISAFENIX 1K

384 px
1 024 px

	VNIR	SWIR
Camera specifications		
Spectrograph	High efficiency transmissive imaging spectrograph	
Spectral range	380 - 970 nm	970 - 2 500 nm
Spectral resolution	4.5 nm	14 nm
F/#	F/2.4	
Smile / Keystone	± 0.35 pixels	
Polarization sensitivity	Throughput practically independent of polarization	
Calibration	Sensor provided with wavelength and radiometric calibration file	
Signal-to-noise ratio (peak)	600 - 1 000:1 *	1 250:1
Spatial resolution	1 024 pixels	
Frame rate	Up to 100 Hz	
Integration time	Adjustable, within frame time	
FOV	40°	
IFOV	0.039°	
Swath width	0.73 x altitude	
Altitude for 1m pixel size	1 400 m	
Electro mechanical shutter	Yes	
Optics temperature stabilization	Yes	
Detector	CMOS	Stirling cooled MCT
Spectral binning options	2x 4x 8x	-
Number of spectral bands	348 174 87	256
Spectral sampling / band	1.7 nm 3.4 nm 6.8 nm	6.3 nm
Data interface	CameraLink 12-bit	CameraLink 16-bit
Operating modes	Hyperspectral and multispectral The operator can create application specific band configurations, and quickly change from one mode or configuration to others in flight operation.	
Typical power consumption **	150 W	
Maximum power consumption **	500 W	
Mechanical characteristics		
Size	Sensor 530 x 530 x 210 mm	DPU 300 x 260 x 195 mm
Weight	22.5 kg	9.5 kg
Environmental characteristics		
Storage temperature	- 20 ... +50 ºC	
Operating temperature	+ 5 ... +40 ºC, non-condensing	

*) Depends on spectral binning
**) Complete system with DPU
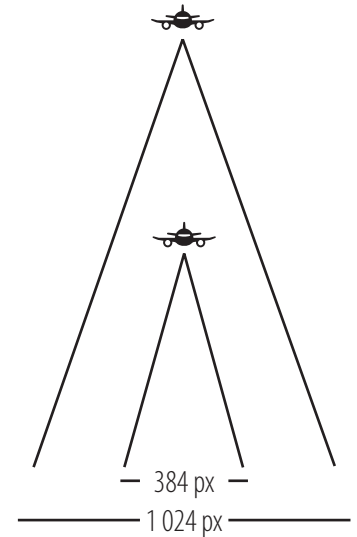
KEY BENEFITS

- Flying costs reduced by 60%
- Survey area covered 2.5 times faster
- Detection of targets occupying only a fraction of a pixel

FEATURES

- VNIR and SWIR wavelengths from 400 nm to 2 500 nm
- A common fore optic eliminates the need to co-register the data
- Fully temperature stabilized sensor head
- Excellent signal-to-noise ratio

APPLICATIONS

- Vegetation mapping: species classification, forest damages, fire science
- Environment: pollution control, environmental impact assesment
- Geology; mineral mapping, oil and gas exploration
- Law enforcement and defence; camouflaged targets, illicit farming