

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

Specim's AisaFENIX 1K, the full spectrum hyperspectral camera is an ideal solution for remote sensing of the environment and other aerial survey applications. The AisaFENIX 1K hyperspectral sensor with 1024 spatial pixels takes the productivity of hyperspectral imaging to an entirely new level. It produces the same top quality full-spectrum hyperspectral data as does its forerunner, AisaFENIX. At the same time, it reduces the flight costs by 60 %, because fewer flight lines are required or collect data with higher accuracy when flying at same height as before.

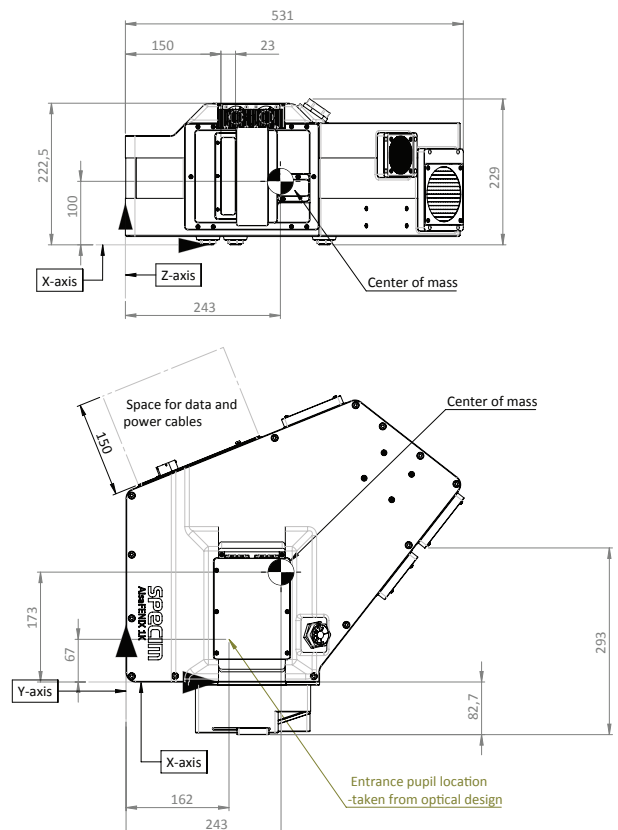
FEATURES AND BENEFITS

- Continuous VNIR/SWIR spectral range from 380 to 2500 nm
- Up to 620 spectral bands
- Readily co-registered data with single common fore optics
- All spectral bands are spatially co-registered, independent of the distance to the target
- Maximized sensitivity and signal-to-noise ratio (SNR)
- Supports interfacing with most widely used GNSS/IMU systems
- Compact for installation on a standard gyro-stabilized standard airborne camera mounts, as well as turrets and medium-sized UAVs

BEST SUITED FOR

- Vegetation analysis, precision agriculture, and environmental monitoring
- Detection of invasive species (such as phragmites) and native species infected by invasive insects (mountain pine beetle, emerald ash borer)
- Detection of illicit / narcotic plants including marijuana, coca, poppy
- Mining and mineral mapping / geological exploration
- Law enforcement and target detection (camouflaged targets, IEDs)

DIMENSIONS



	VNIR			SWIR
CAMERA SPECIFICATIONS				
Spectrograph	High efficiency transmissive imaging spectrograph			
Spectral range	380 - 970 nm			970 - 2 500 nm
Spectral resolution (mean)***	3.5 nm			10 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
Typical power consumption **	150 W			
Maximum power consumption **	300 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 °C			
Operating temperature	+5 ... +40 °C, non-condensing			

*) Depends on spectral binning

**) Complete system with DPU

***) Typical spectral resolution obtained by calculating mean data from several units. Exact spectral resolution may vary from unit to unit

Specim, Spectral Imaging Ltd. ▪ A Konica Minolta Company ▪ POB 110, FI-90591 Oulu Finland ▪ Elekroniikkatie 13, Oulu Finland
Tel +358 (0) 10 4244 400 ▪ VAT Identification number FI10079234 ▪ info@specim.com ▪ www.specim.com

Information in this document is subject to change without notice. Specim, Spectral Imaging Ltd. reserves the right to change or improve its products and specifications and to make changes in content without obligation to notify any person or organization of such changes or improvements.