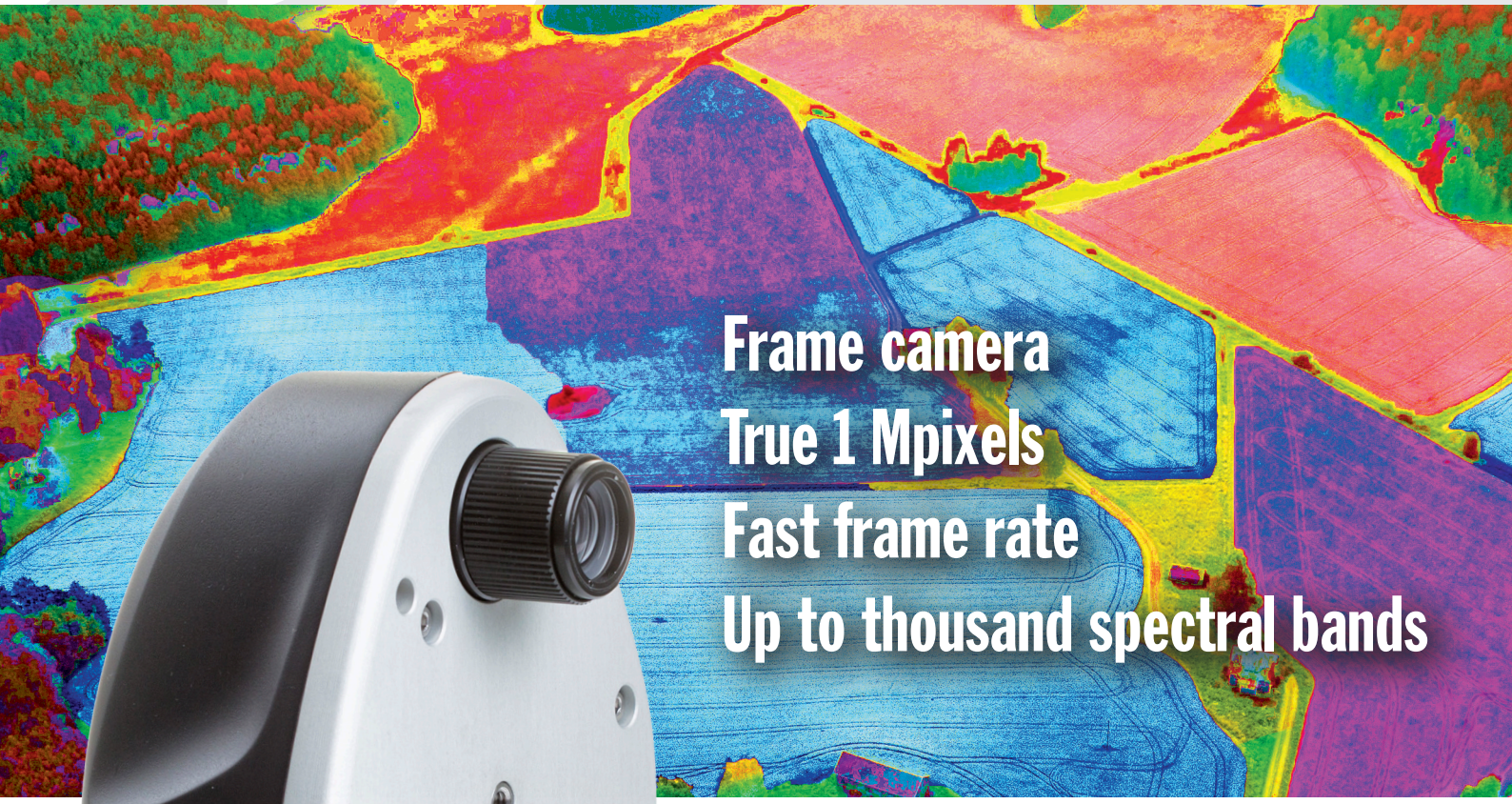
HSC-2 HYPERSPECTRAL CAMERA



Senop HSC-2 Hyperspectral Camera is a frame-based system providing snapshot images in VNIR spectral range with up to thousand of narrow bands. It is the only snapshot device on the market providing only true image pixels with 1Mpixel resolution. No interpolation used.

The frame-based approach with integrated positioning and IMU enables easy image stitching for the mosaics with high resolution images. The Senop HSC-2 camera has been used with a wide variety of platforms including drones and fixed wing UAVs in several applications like: agriculture, forestry and water research, industry, medical and forensic.

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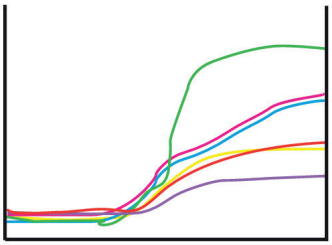
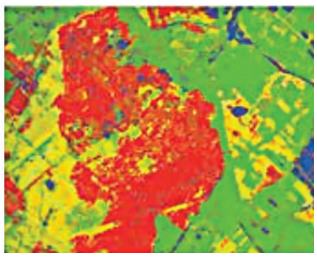
HYPERSPECTRAL FRAMES

SPECTRAL SIGNATURES



ANALYSIS RESULT MAP



Data processing flow for typical hyperspectral applications.

Senop HSC-2 camera saves image frames in ENVI datacube. 1 Datacube includes 1 predefined shooting sequence in order of wavelengths. Multiple sequences can be freely set in HSI PC-software.

Product set includes

- Senop HSC-2 Hyperspectral camera
- AC/DC Adapter with cable
- Ethernet cable 3m
- Trig-sync cable
- HSI-2 PC software in USB-memory
- Transport case
- Instruction manual

TECHNICAL DATA

Parameter	Specification	Remarks
Spectral Range	400-1000 nm	The camera is sensitive for this range, application specific subranges need to be selected. Typical 500-900 nm.
Spectral FWHM	5-10 nm	
Spectral Step	0.1 nm	
Spectral Bands	up to 1000	The bands are freely selectable/programmable.
Horizontal FOV	36.8°	Diagonal 52.0°
Vertical FOV	36.8°	Diagonal 52.0°
Image Sensor	CMOS	Pixel size is 5.5 µm x 5.5 µm.
Dynamic Range	10-12 bits	
Max Image Rate (frames / s)	74 (12 bit) 149 (10 bit)	The camera exposures each band separately.
Image Resolutions	1024x1024	All pixels are true image pixels. No interpolation used.
Exposure time	Adjustable	Maximum frame rate may be limited if exposure time is long.
Memory	1TB	Shooting time with max frame rate 12 bit: 1h 45min & 10 bit: 1h 17min.
Connections	GigE RJ-45 USB 2.0 type-C Mini-Displayport v1.2 IO port with UART and 4GPIO pins MMCX for external GPS antenna (if needed)	
Weight	986 g	
Dimensions (l x w x h)	199.5 mm x 130.9 mm x 97.2 mm	
Positioning	GPS and BeiDou	With external antenna also Glonass and Galileo.
Voltage supply	7-17 VDC	Set includes AC/DC adapter with cable.
Inertial Measurement Unit	Gyroscope and 3 axis accelerometer	For accurate image stitching.
Adjustable optics	Focus distance: ∞ - 30 cm	Limited FOV 30 cm – 2 cm.
Live Use	External display can be attached	
PC-software	Senop HSI-2	Windows 7 & 10
Data export	Standard ENVI	

Our policy is continuous development and improvement. We therefore reserve the right to alter technical data without notice.

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