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Preliminary!



ORANGE EYE SCAN VIS / VNIR

The OrangeEye Lab is a laboratory spectral imaging camera for VIS and VNIR with the spectral range from 500 to 950 nm. The system is based on a pushbroom imager with an internal scanning unit to acquire complete hyperspectral data cubes.



- Laboratory spectral imaging camera
- Spectral range from 500 to 950 nm
- Integrated broadband LED illumination optimized for VIS / VNIR imaging
- Pushbroom imager with internal scanning unit
- No movement of samples or camera is necessary
- USB 3 data interface
- Easy handling (small and light weight)
- Can be adapted to standard microscopes via c-mount camera adapter

Spectrograph	
Spectral range	500 nm - 950 nm
Dispersion	113 nm / mm
Grating	Transmission, holographic
Pixel resolution	0.625 nm / pixel
F-number	2.9
Slit width	50 μm (others on request)
Efficiency	> 50 % independent of polarization
Camera	
Sensor	CMOS
Pixels in full frame	2048 x 1088
Pixel size	5.5 x 5.5 μm
Bit depth	12 bit
Data interface	USB 3
Dynamic Range	60 dB
Binning	Possible (software option)
ROI	Possible (software option)
Objective Lens	
Lens mount	Standard C-mount
Lighting unit	
Technology	LED broadband
Spectral range	510 nm - 1100 nm
Operating modes	adjustable by software, continuous, PWM, on/off
Lens type	Wide +/- 19°
Electric	
Power supply	24 V
USB3 connector	Type A
Mechanic	
Dimensions	260 x 166 x 150 mm
Housing	Aluminum / Steel
Weight	ca. 2.7 kg
Operating conditions	
Temperature (operating)	0 – 30 °C
Temperature (transport)	-10 – 45 °C

Preliminary!

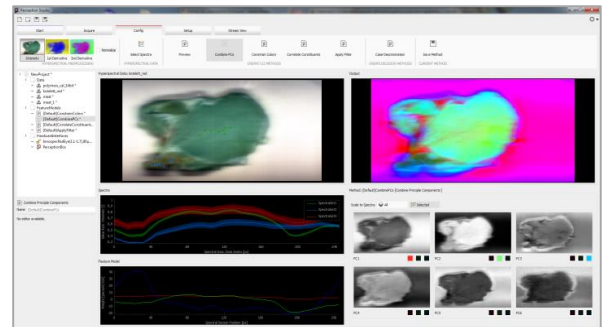
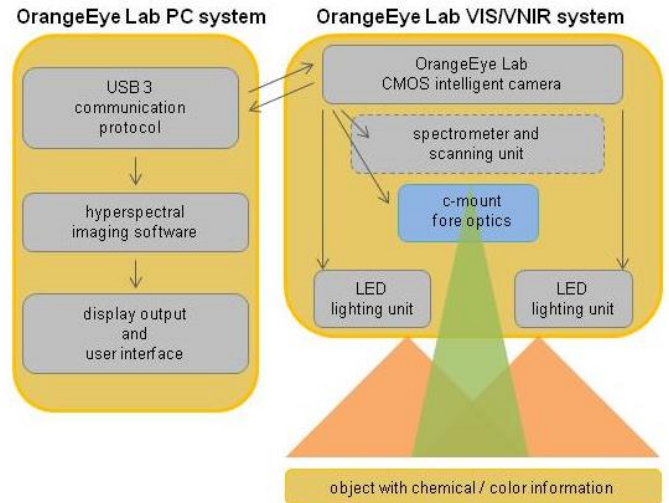


Functionality

In **Hyper-Spectral Imaging (HSI)** technology three dimensional data cubes (X (spatial), Y (spatial), λ (spectral)) are generated. Based on this data cubes different images and chemical information can be extracted.

The 3D data cubes are scanned in a few seconds depending on the camera parameterization. One application mode is a continuous acquisition mode with slightly reduced image resolution. This way you get one hyperspectral data cube per second.

With hyperspectral imaging software you can start your chemical imaging work. On the right picture you can see an image of pork chop taken with the software *Perception Studio* from Perception Park for example.



Accessories

- Fore optics
- Desk mount arm

Applications

- Food Analysis
- Agriculture
- Polymer Analysis
- Arts
- Life Sciences
- Forensics
- Medical Diagnostic
- Chemical Analysis
- Quality Control

