Spectral Microscopy

**Most flexible
HSI Camera**

cubert
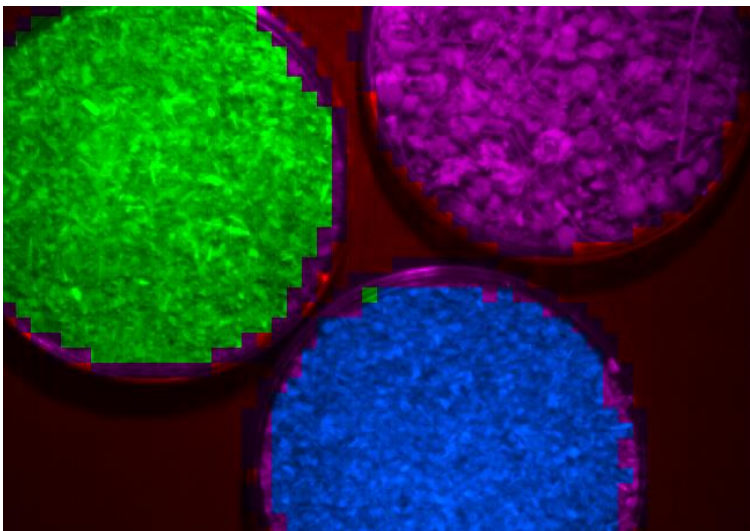
FireflEYE 185

Assessing hyperspectral microscopy in real-time

The FireflEYE 185 brings hyperspectral imaging to microscopy, and also enables endoscopy. In life sciences the time-saving advantage of the snapshot technology (thanks to no-scanning) really makes itself known, as saving time saves patients. The camera can also monitor real-time processes, such as samples in petri dishes for example.

The relay lens also allows for a lens change without camera re-calibration. And a close-up lens set allows a macroscopic scale view of a spot size of just a few mm.

Advantages

- 3D hyperspectral snapshot imager (x, y, λ)

- VNIR coverage (450-950 nm)

- 125 spectral bands

- 12-bit / 14-bit version

- 25 Hz max frame rate

- Compatible with microscopes

FireflEYE 185 mounted on a UAS

Hyperspectral Mapping with the FireflEYE 185

TECHNICAL SPECIFICATIONS
FIREFLEYE V185

Technology	Multipoint Spectrometer
Number of Sensors	2
Wavelength Range	450 – 950 nm
Spectral Bands	125
Spectral Sampling	4 nm
Spectral Resolution (FWHM)	8 nm @ 532 nm
Spatial Resolution	50 x 50 pixel
Spatial Resolution 2nd Sensor	1000 x 1000 pixel
Total Spectra / Image	2500
Total Data Points / Cube	0.3 Million
Data Depths	12 bit / 14 bit
Readout	Global shutter
Max Frame Rate	25 Hz
Integration Time	0.1 – 1000 ms
Field of View (FOV)	30°, 20°, 13°, 7°, lens selectable
Power Consumption	7 W
Data Link	2 GigE
Weight	490 g
Size	200 x 67 x 60 mm

For all scenarios

UAS Mapping - The FireflEYE 185 was the first-ever light-weight hyperspectral snapshot camera used for aerial mapping from a UAS. The user has a choice of lenses, enabling different fields of view for different tasks.

In lab use the FireflEYE can be equipped with close-up lenses, allowing a macroscopic scale view with a spot size of only a few mm to cm.

Attaching a relay lens to the FireflEYE provides for full interchangeability to C-mount lenses. Mount the camera on your microscope or endoscope without the need of an additional calibration.

The latest improvements to the FireflEYE include upgrading the main sensor to a modern CMOS sensor. The 14-bit version has 2x higher signal-to-noise-ratio and 4x higher dynamic range compared to the S185 (needing 4 times longer integration times).