Bringing Light Field Technology to HSI

The Cubert ULTRIS breaks new ground as the first HSI camera that is based on the light field technology. The camera features an Ultra-HD CMOS 20 MP sensor, making it the imaging spectrometer with the world-wide highest available resolution. The camera provides a native image resolution of 410x410 pixels with 100 spectral channels, continuously covering the wavelength range from 450 nm to 850 nm.
**Spectral Properties**

- Wavelength range: 450±10 – 850±10 nm
- Spectral sampling: 4 nm
- Sampled bands: 100
- Spectral resolution / FWHM: 12 nm @ 532 nm
- Wavelength accuracy: 0.5 nm

**Spatial Properties**

- Spatial resolution: 410 * 410 px
- Data cube: 168,100 spectra / cube

**Optical Properties**

- Field of View (FOV): Typ. 35°

**Sensor Properties**

- Detector: Silicon CMOS
- Sensor size: 20 Megapixel
- Radiometric resolution: 12 bit
- Integration time: 0.1 – 1000 ms
- Frame rate: Up to 6 Hz (fps)
- Data size (raw): 40 MB / data cube

**Camera Properties**

- Connection: 2x GigE
- Operation temperature: 5 – 65° C
- Protection class: IP 40 (S20) – IP 68 (U20)
- Power consumption: DC 12 V / 10 W
- Size (S20): 60 * 60 * 57 mm
- Weight (S20): < 350 g

*Specs may be subject to change*

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**Pioneering Concept**

The ULTRIS records an object with a multitude of images, each with its own optical bandpass filter with a different center wavelength. This is made possible by combining a continuously-variable bandpass filter with a lenslet array.

Applying this concept to the UHD sensor, the unprecedented number of 168,100 spectra is acquired simultaneously.

**What you should know**

With its mass of less than 350g, the camera is even more light-weighted than the established FireEye 185, making it ready for an easy handling onboard a UAV. To meet the requirements of harsh industrial environment, a special ruggedized housing is available with IP65, ensuring a high robustness. Upgrade the ULTRIS to waterproof IP68 and use it underwater to a depth of 5m.

Suitable for:

- LAB
- UAV & FIELD
- UNDERWATER