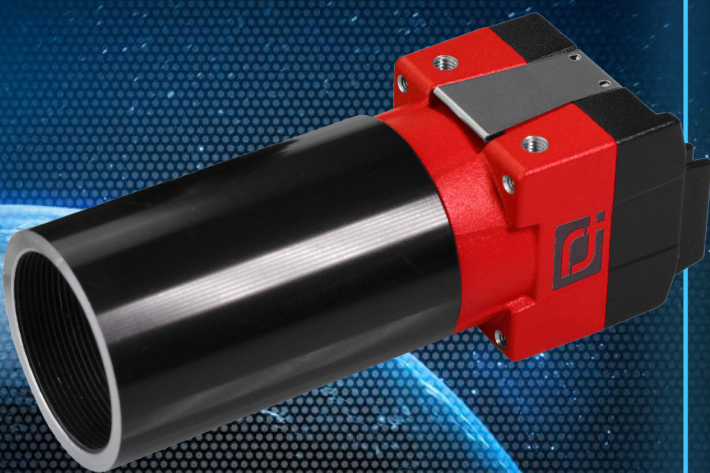


SWIR Snapshot Pioneer

# ULTRIS SWIR 1



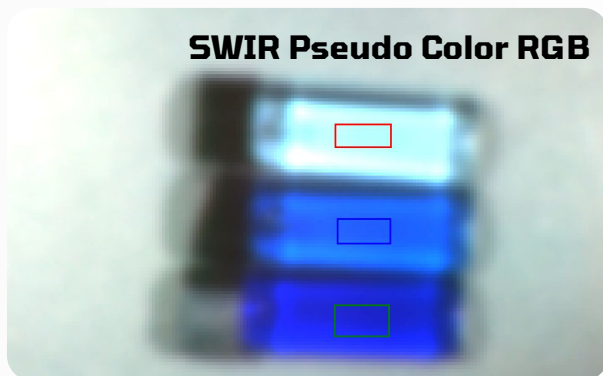
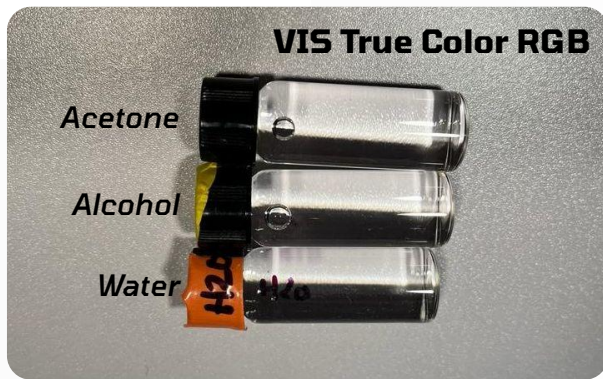
## Hyperspectral Snapshot SWIR Camera at Video Rates

Based on our hyperspectral light field camera technology, the ULTRIS SWIR 1 offers a versatile imaging solution with its broad wavelength range (980-1650 nm) within the **Short-Wave Infrared** region. The C-Mount compatibility, supported by the integrated Relay Lens Adapter, enables seamless integration of various optics setups.

Notably, the Relay Lens allows users to **change lenses** at any time. The camera's high-speed imaging of up to **80 Hz** further ensures efficient capture of dynamic scenes. With its compact dimensions (30x30x85 mm), the ULTRIS SWIR 1 is ideal for space-limited applications in laboratories or field.

### Technical Specifications ULTRIS SWIR 1

|                      |                     |                     |                            |
|----------------------|---------------------|---------------------|----------------------------|
| Technology           | Light Field         | Attachable Optics   | C-Mount (for 2/3" sensors) |
| Readout              | Global Shutter      | FOV (Field of View) | any (lens-dependent)       |
| Spatial Resolution   | 200 x 200 pixel     | Data Depth          | 12 bit                     |
| Wavelength Range     | 980 - 1650 nm       | Max Frame Rate      | 80 Hz                      |
| Spectral Bands       | 38                  | Data Link           | USB 3.0                    |
| Spectral Sampling    | 18 nm               | Sensor              | Sony IMX990                |
| FWHM                 | 70 nm @ 950 nm      | File size processed | 3 MB                       |
| Spectral Data Points | 38 x 40 000 (1.5 M) | Weight              | 140 g (w/o lens)           |
| Bandpass Filter      | LVF                 | Dimensions          | 30 x 30 x 85 mm (w/o lens) |
| Integration Time     | 0.1 – 1000 ms       | Options             | Relay Lens Adapter         |



## The Snapshot Advantage

Thanks to its snapshot nature, the ULTRIS SWIR 1 offers distinct advantages over push-broom systems. Instantaneous capture accelerates data acquisition for **dynamic environments**, reducing motion artifacts, and simplifying setup. With **no moving parts**, the camera exhibits high robustness, simplifying setup, enhancing durability, and providing adaptability for improved overall performance across various applications.

## Various SWIR Applications

**1000-1100 nm:** Enables precise **soil moisture** mapping for agriculture.

**1100-1300 nm:** Enhances **plastics quality** assessment and aids in moisture content analysis for food products.

**1300-1500 nm:** Detects **carbon-hydrogen bonds**, offering insights for chemical analysis.

**1500-1700 nm:** Excels in **water content** assessment, beneficial for rapid evaluation in agriculture and detailed analysis in various substances.

Notably, the SWIR region is valuable for **art restoration**, making details, or even old and hidden paintings.

