HINALEA XSWIR PRO

HYPERSPECTRAL IMAGER
1120 – 2100 nm



FRONT-STARING, FULL-FRAME IMAGING

No trade-off between spectral and spatial resolution

LIVE SPECTRAL IMAGING WITH NEAR REAL-TIME ACQUISITION

Dynamic wavelength selection and live stream classified images

INTEGRATED SOFTWARE PLATFORM AND SDK

Includes powerful tools for intuitive data analysis and integration

Hinalea

INTELLIGENT HYPERSPECTRAL IMAGING

HINALEA XSWIR PRO

SPECIFICATIONS

The HINALEA XSWIR PRO intelligent imaging system combines high spatial and spectral resolution across the extended shortwave infrared 1120-2100 nm range. Featuring application-specific wavelength selection, this compact, front-staring imaging platform is powered by Hinalea's tunable Fabry-Pérot Interferometer (FPI). The XSWIR PRO captures complete two-dimensional images at each wavelength without mechanical scanning, eliminating the image uniformity limitations associated with conventional push-broom hyperspectral systems. Designed for laboratory research, industrial inspection, and machine vision integration, the XSWIR PRO delivers high spectral fidelity, spatial consistency, and flexible system integration in a portable, cost-effective platform.

SPECTRAL PERFORMANCE

Standard lens	16.6 mm FL; 100 mm to ∞; 33° FOV
Sensor spatial resolution	636 x 508 pixel (0.32 MP)
Spectral range	1120 –2100 nm
Spectral bands	225
Spectral resolution	15nm FWHM
Dynamic range	8 or 16-bit
Illumination	Optional

SENSOR INFORMATION

Sensor type	Extended InGaAs
Objective mount	SM1

MECHANICAL

Dimensions (L×W×H)	263.3 mm x 80 mm x 80 mm
Weight (Mass)	6.0 lbs. / 2.72 kg

ELECTRICAL

Input voltage	Controller: 110 VAC/60 Hz or 220 VAC/50 Hz Sensor: 10.8 VDC to 30.0 VDC
Data interfaces	Controller: USB2.0, connector USB Micro Sensor: Gigabit Ethernet/IEEE 802.3 1000BASE-T

ENVIRONMENTAL

Operating temperature	15 °C to 30 °C
Humidity	65%, non-condensing

Subject to change

KEY BENEFITS

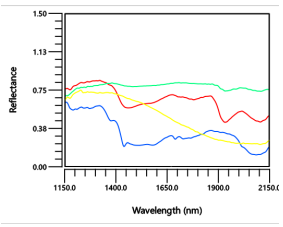
- **High-Quality Hyperspectral Data:** Full-frame image acquisition delivers highly uniform, spatially registered hyperspectral data cubes for quantitative analysis.
- **Live Stream Capability:** Maintains full-frame front-staring imaging advantages during NRT (Near Real-Time) mode operation.
- **Compact and Portable:** Lightweight design simplifies laboratory and field deployments.
- **Open Data Workflow:** Export hyperspectral data cubes in industry-standard formats for seamless analysis in ENVI, MATLAB, Python, Hinalea software, and other 3rd party platforms.



Greyscale Image (corn starch, sugar, salt and baking soda)



HSI Image



Spectra

(formerly Model 4450)