HINALEA SWIR PRO

HYPERSPECTRAL IMAGER

950 – 1700 nm



FRONT-STARING, FULL-FRAME IMAGING

No trade-off between spectral and spatial resolution

BAND-SELECTABLE SPECTRAL ACQUISITION – LIVE SPECTRAL IMAGING

Target specific application wavelengths at max speed and live stream classified images

INTEGRATED SOFTWARE PLATFORM AND SDK

Includes powerful tools for intuitive data analysis and integration

Hinalea

INTELLIGENT HYPERSPECTRAL IMAGING

HINALEA SWIR PRO

SPECIFICATIONS

The HINALEA SWIR PRO intelligent imaging system combines high spatial and spectral resolution with portability, affordability. Covering the 950 –1700 nm range, the SWIR PRO uses a front-staring architecture to capture the full area of interest without mechanical scanning, enabling more uniform imaging than traditional push-broom systems in dynamic environments. The SWIR PRO provides a complete solution for identifying materials, monitoring processes, and detecting subtle differences invisible to conventional imaging.

SPECTRAL PERFORMANCE

Standard lens	~23° FOV, 500 mm to ∞
Sensor spatial resolution	640 x 512 pixel (optional 1280 x 1024)
Spectral range	950 –1700 nm
Spectral bands	188 nominal
Spectral resolution	15nm FWHM
Dynamic range	16-bit
Illumination	Optional

SENSOR INFORMATION

Sensor type	InGaAs
Objective mount	SM1

MECHANICAL

Dimensions (L×W×H)	218mm x 76.4mm x 76.6mm
Weight (Mass)	3.52 lbs. /1.60 kg

ELECTRICAL

Input voltage	Controller: 12VDC, 30W (4W) Sensor: 12VDC ±0.5V (<2.5W (NUC ON))
Data interfaces	USB 2.0 Micro, 14-bit Camera Link (Base Configuration / SDR)

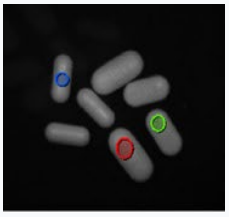
ENVIRONMENTAL

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

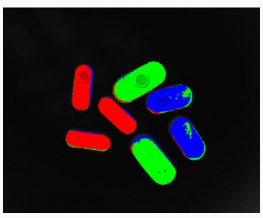
Subject to change

KEY BENEFITS

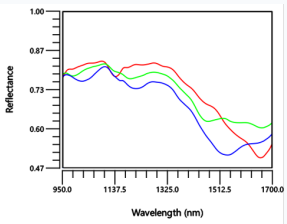
- **High-Quality Hyperspectral Data:** Full-frame image acquisition delivers highly uniform, spatially registered hyperspectral data cubes for quantitative analysis.
- **Live Stream Spectral Imaging and Classification** — Dynamically selectable wavelengths support workflows from high-resolution spectral capture to near real-time imaging and classification.
- **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.



RGB Image



HSI Image



Spectra

(formerly Model 4450)