HINALEA VNIR ULTRA

HYPERSPECTRAL IMAGER
400 – 1000NM

FRONT-STARING, FULL-FRAME IMAGING

No trade-off between spectral and spatial resolution

MICROSCOPE COMPATIBLE

Easily adapts to standard microscopes

INTEGRATED SOFTWARE PLATFORM AND SDK

Includes powerful tools for data analysis and integration

Hinalea

INTELLIGENT HYPERSPECTRAL IMAGING

www.hinalea.ai

HINALEA VNIR ULTRA

SPECIFICATIONS

The **HINALEA VNIR ULTRA** is Hinalea's top of the line VNIR hyperspectral imaging system. Powered by its tunable Fabry–Perot Interferometer, the VNIR ULTRA captures complete 2D images at each wavelength, producing high-quality hyperspectral data cubes without mechanical scanning.

Designed for laboratory research, the VNIR ULTRA delivers high spectral fidelity, excellent spatial resolution, and flexible system integration and high sensitivity even for light or photon limited specimens.

SPECTRAL PERFORMANCE	
Standard lens	15° and 30° FOV lens 150 mm to ∞
Sensor spatial resolution	2048 × 2048 (4.2 Megapixel) – Full Array Scan
Spectral range	400–1,000 nm
Spectral bands	301
Spectral resolution	4 nm FWHM
Dynamic range	User selectable 8- or 16-bit
Illumination	Optional

SENSOR INFORMATION	
Sensor type	Back-side illuminated sCMOS
Objective mount	SM1

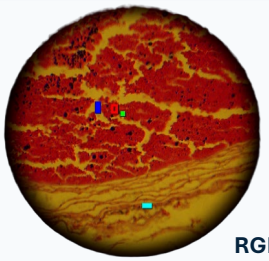
MECHANICAL	
Dimensions (L×W×H)	With 30° FOV lens – 78×78×395 mm With 15° FOV lens – 78×78×377 mm With Microscope attachment – 78×78×348 mm
Weight (Mass)	8.0 lbs / 3.63 kg

ELECTRICAL	
Input voltage	Voltage: 12 V Max. Current @ 12V: ≤ 3 A (36.4 W) Steady State @ 0°C: 1.3 A (15.6 W)
Data interfaces	USB-C/USB 3.0

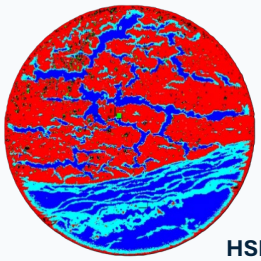
ENVIRONMENTAL	
Operating temperature	15° – 30°C
Humidity	65% non-condensing

KEY BENEFITS

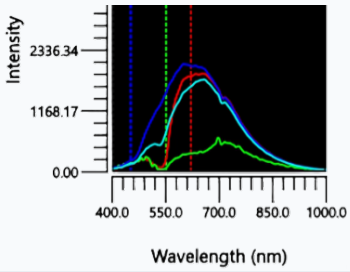
- **High-Quality Hyperspectral Data:** Full-frame image acquisition delivers highly uniform, spatially registered hyperspectral data cubes for quantitative analysis.
- **Microscope compatibility:** The VNIR ULTRA offers seamless integration with scientific microscopes and custom optical assemblies with an SM1 mount which coupled to c-, f- and other adapters accommodates all major brands.
- **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, Python, Hinalea software, and other 3rd party platforms.



RGB Image



HSI Image



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