

Product sheet

Lab Scanner

Hyperspectral Equipment



Specially designed for high performance, the Newtec Lab Scanner is a powerful, all-in-one solution for research and proof-of-concept development. It delivers fast, high-resolution hyperspectral imaging with intuitive operation and of-line data processing for detailed spectral analysis.

With focused broadband halogen illumination, a 300 mm scanning width, and precise imaging capabilities, it provides accurate analysis of small to medium-sized samples, capturing fine spectral and spatial details.

Equipped with one of our top-tier pushbroom cameras, the Lab Scanner is available with either our Hypervision 1000 or Hypervision 1700 hyperspectral cameras.

Optimized for flexibility and precision, the HSI Lab Scanner simplifies hyperspectral data acquisition, making it an ideal tool for researchers and industry professionals.

Applications:

- Suited for scanning of liquids and delicate objects
- Rapid quality control and chemical analysis
- Surface treatment inspection
- Material recognition

HYPERVISION 1000 (VIS-NIR)

The Hypervision 1000 is a pushbroom hyperspectral camera covering the visible to near-infrared (VIS-NIR) range from 400–1000 nm. Powered by the Gsense sCMOS sensor, it provides high spectral precision for industrial and research applications.

Hardware	Description
Slit sizes	10 µm, 20 µm (standard), 30 µm
Spectral resolution	6 nm
CPU	AMD Ryzen V1605B (8) @2.000 GHz
GPU	AMD ATI Radeon Vega Series
AI Chip	Hailo-8 Edge
Sensor Interface (AFE)	Kintex-7 XC7K160T (PCIe 2.0 x4)

Specifications	Hypervision 1000	Hypervision 1700
Spectral range	400–1000 nm	430 – 1700 nm
Spatial resolution	1884 pixels	1296 pixels
Spectral bands	330	920
Spectral sampling	1.77 nm/pixel	1.38 nm/pixel
Pixel size	6.5 µm	5.0 µm
Maximum frame rate*	250 fps	150 fps
Shutter type	Global/Rolling	Global

HYPERVISION 1700 (VIS-SWIR)

The Hypervision 1700 extends hyperspectral imaging into the short-wave infrared (SWIR) range, covering 430–1700 nm in a single camera unit. Utilizing the IMX990 sensor, it enables enhanced chemical differentiation, making it ideal for applications such as plastic type identification, surface treatment analysis, and bio solutions.

RGB VS HYPERSPECTRAL IMAGE

Our Hypervision system enables plastic type differentiation beyond the capabilities of RGB cameras. In the image, it effectively identifies Polypropylene (PP) and Polyethylene (PE).

Hyperspectral imaging reveals chemical composition differences invisible to the naked eye, aiding in fruit bruise detection, crop stress analysis, water content measurement, and material identification.

