

Product sheet

Buteo

Hyperspectral Equipment



The Buteo Hyperspectral Imaging system is a high-performance solution for quality control and material innovation in food, plastics, and packaging. It enables advanced, non-invasive analysis to reveal hidden product features, helping businesses improve efficiency and reduce waste.

At the core of Buteo is the Hypervision hyperspectral camera, available in two high-performance configurations: one covering the visible to near-infrared (400–1000 nm) range, and the other extending into the short-wave infrared (430–1700 nm). This spectral flexibility allows for precise material differentiation and deeper insights into product composition.

From identifying hidden text in ancient manuscripts to sorting plastics and improving food inspection, Buteo opens new possibilities for industrial innovation. It empowers customers to access richer data and more refined sorting options, pushing the boundaries of what's possible in modern quality assurance.

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.

