Q technology

Product sheet
HYPERVISION
Hyperspectral cameras

Qtechnology's Hypervision series offers high-performance hyperspectral cameras for industrial and lab applications. Built for machine builders, integrators, and researchers, they deliver precise spectral analysis across key wavelength ranges—perfect for agriculture, food, plastics, and material identification. Advanced CMOS sensors and high-speed design ensure seamless integration with common vision software.

Hardware	Description
Slit sizes	**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)

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.

Application examples:

- Agriculture and plant health analysis
- Food grading

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.

Application examples:

- Surface treatment inspection
- Material recognition

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

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.
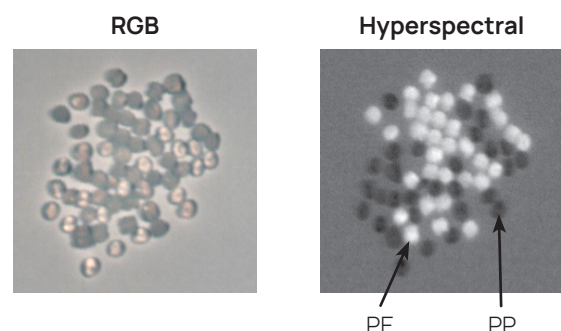
RGB	Hyperspectral

INCLUDED SOFTWARE

The Hypervision system includes powerful software for data analysis. HV Explorer is a lightweight Python tool for loading, visualizing, and processing hyperspectral data cubes. HV SDK, a Rust-based core with Python and C bindings, enabling seamless integration of hyperspectral workflows into real-world applications. More information about our hyperspectral cameras can be found docs.qtec.com