SPECIM

A Konica Minolta Company

PRODUCTS

SPECTRAL CAMERAS

Specim is the leading industrial HSI camera manufacturer. We offer the widest camera portfolio for different wavelength ranges to serve industry, research, and governmental organizations. Whether working in a laboratory, industrial facility, or the field, we got you covered. The camera models vary in terms of spectral and spatial resolution, spectral response, imaging speed, and configuration options. Contact us for the optimal solution for your application.



Model	Specim FX10 (*)	Specim FX17	Specim GX17	Specim FX19	Specim SX25	SWIR	Specim FX50	Specim FX120
Spectral Range	400 – 1000 nm 400 – 770 nm (FX10c)	900 – 1700 nm	980 – 1730 nm	1130–1920 nm	960 – 2500 nm	1000 – 2500 nm	2.7 – 5.3 µm	7.7 – 12.3 µm
Spatial Pixels	1024	640	480	640	640	384	640	616
Spectral Bands	224 / 140 (FX10c) / 100 (FX10+)	224	168	224	392	288	154	160
Spectral Resolution (FWHM)	5.5 / 15 (FX10+) nm (mean)	8 nm (mean)	8 nm (mean)	8 nm (mean)	8 nm (mean)	12 nm (mean)	35 nm (mean)	<180 nm
Spectral Sampling/pixel	2.7 / 6.3 (FX10+) nm	3.5 nm	4.7 nm	3.5 nm	4 nm	5.6 nm	8.44 nm	30 nm
Max Frame Rate	327 FPS full range 514 FPS full range (FX10c) 707 FPS full range (FX10+)	670 FPS full range (FX17) 527 FPS full range (FX17e)	800 FPS full range	527 FPS full range	162 FPS full range	450 FPS full range	377 FPS full range	240 FPS full range with 1ms integration time
Lens Options	12°, 24°, 38°, 47°, 51°, 83°, macro lens	12°, 22°, 38°, 53°, 66°, 75°, 90°, macro lens	12°, 22°, 38°, 53°, 66°, 75°, 90°, macro lens	12°, 22°, 38°, 53°, 66°, 75°, 90°, macro lens	22°, 38°, 66°, macro lens	9°, 17°, 23°, 34°, 54°, macro lens	24°, 45°, 60°	24°, 32°
F-number	F/1.7	F/1.7	F/1.7	F/1.7	F/2.0	F/2.0	F/2.0	F/2.0
SNR	420:1	1000:1	700:1	1170:1	1500:1	1050:1	1300:1 (1.5ms); 1800:1 (0.2ms)	2500:1 (1.5ms) ; 3000:1 (0.2ms)
Interface	GigE Vision, CameraLink	GigE Vision, CameraLink	CameraLink	GigE Vision	GigE Vision, Custom ethernet	CameraLink	GigE Vision, Custom ethernet	GigE Vision, Custom ethernet
Dimensions	150 x 85 x 71 mm	150 x 85 x 75 mm	202 x 75 x 102 mm	150 x 71 x 85 mm	280 x 200 x 150 mm	545 x 176 x 178 mm	280 x 202 x 161 mm	250 x 300 x 220 mm
Weight	1.3 kg	1.56 kg	1.9 kg	1.5 kg	5.3 kg	14 kg	7 kg	15 kg
Integrated shutter	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Typical applications	• Vegetation & agriculture • Phenotyping • Color & density in printing • Display & light source inspection • Food quality **(*) High-speed FX10+ and color optimized FX10c also available**	• Food & feed quality • Waste sorting • Recycling • Moisture measurement • Thread detection & security	• Food sorting • Food inspection and grading • Waste sorting • Recycling	• Plastics sorting • Textile recycling • Electronics recycling • Foil & thin-film inspection • Pharmaceuticals	• Coating layer inspection • Mineral and ore classification • Agricultural & food quality analysis • Chemical & pharmaceutical research • Moisture & composition measurement • Cultural heritage & art conservation	• Chemical and material sorting • Pharmaceutical manufacture • Recycling • Mineral mapping • Food and agriculture • Moisture content distribution • Art research and archiving • Forensics	• Black plastic sorting • Metal industry • Geology and mining • Safety and security	• Mineral exploration • Heat mapping • Environmental analysis • Thermal anomaly detection • Safety and security

SPECIMONE

SPECTRAL IMAGING PLATFORM



Create new hyperspectral imaging applications faster, cheaper, and easier than ever before and reduce time-to-market with SpecimONE.

- Acquire spectral data with industry proven Specim HSI camera.
- Create classification models off-line with SpecimINSIGHT software.
- Apply the models into an in-line system with SpecimCUBE processing platform.
- No need for coding or in-depth knowledge of spectral imaging!

SPECTROGRAPHS

Specim's imaging spectrographs offer a distortion-free image with the highest optical performance on the market. We optimize each model for spectral resolution, detector size, spatial resolution, and imaging speeds required for the most demanding applications.



ImSpector V8

Standard series spectrograph designed for the VIS spectral range 380 - 800 nm.



ImSpector V10

Standard series spectrograph designed for the VNIR spectral range 400 - 1000 nm.



ImSpector V10E

Enhanced series spectrograph designed for the VNIR spectral range 400 - 1000 nm.



ImSpector N17E

Enhanced series spectrograph designed for the NIR spectral range 900 - 1700 nm.

AIRBORNE SYSTEMS

The Specim AFX series is a state-of-the-art hyperspectral camera solution for remote sensing. The core of the AFX is the leading-edge, compact hyperspectral imaging camera integrated into a powerful microcomputer and high-end GNSS/IMU unit.



Specim AFX10

All-in-one VNIR hyperspectral imaging solution for spectral ranges from 400 to 1000 nm consisting of an HSI camera, a small and powerful computer, and a high-end GNSS/IMU unit in a compact enclosure that can be installed on multiple drone types.



Specim AFX17

All-in-one NIR hyperspectral imaging solution for spectral ranges from 900 to 1700 nm consisting of an HSI camera, a small and powerful computer, and a high-end GNSS/IMU unit in a compact enclosure that can be installed on multiple drone types.

GEOLOGY SYSTEMS

Geological samples such as drill cores can be rapidly mapped for almost all minerals using hyperspectral imaging. Specim's geological systems create an image where each pixel contains the full spectrum unique to each mineral of interest. Fast, automated algorithms identify minerals and convert the data into mineral maps.



SisuRock

A fully automated hyperspectral core imaging system for fast and easy scanning of drill cores and other geological samples, capable of imaging a single core in high-resolution mode or an entire core box in high-speed scan mode.

SOFTWARE

Specim offers easy-to-use and efficient software solutions for data capture, model creation, and application development. We can also recommend commercial software solutions that are compatible with Specim cameras.



SpecimINSIGHT

SpecimINSIGHT is a desktop hyperspectral image processing software tool that allows users to browse and explore data, create and validate classification models. Part of the SpecimONE spectral imaging platform.



Lumo family

Lumo product family is a selection of data acquisition software for Specim cameras, scanners and airborne systems.



CaliGeoPRO

CaliGeoPRO is a data processing tool to radiometrically correct and georeference hyperspectral data acquired with Specim AISA and AFX series sensors.

ACCESSORIES

Specim provides several accessories for its hyperspectral cameras and systems. From computing power, scanners, and lenses, to filters, we got you covered.



SpecimCUBE

An efficient processing platform that receives data from Specim cameras and processes them in real-time based on a classification model created with SpecimINSIGHT, and streams the results to the target systems (e.g., sorting machine or machine vision system).



LabScanner 40 x 20

A compact 40 x 20 scanner frame for laboratory use.



LabScanner 100 x 50

A large scanner frame for laboratory use.



RS10 Rotary Stage

Scan an image of a stationary target or scenery in the lab and field with Specim hyperspectral cameras. Maximum payload 10 kg.



RS50 Rotary Stage

Scan an image of a stationary target or scenery in the lab and field with Specim hyperspectral cameras. Maximum payload 50 kg.



Specim HI400S

Halogen illumination unit designed for hyperspectral imaging in industrial and research environments. It delivers stable, high-intensity light for accurate and repeatable spectral data across various materials and conditions in the visible to short-wave infrared 400-2500 nm range.

ABOUT SPECIM

Founded in 1995, Specim is the pioneer and leading global supplier of hyperspectral imaging solutions. We offer the broadest camera portfolio that covers wavelengths from visible to the thermal range, imaging spectrographs, software, and accessories to serve industry, research, and governmental organizations worldwide.

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