SPECTRAL IMAGING

SPECIM FX SERIES

SMALL, FAST & AFFORDABLE HYPERSPECTRAL CAMERAS SPECIFICALLY DESIGNED FOR INDUSTRIAL MACHINE VISION

SPECIM FX SERIES

See the invisible, collect more information than is available with any other inspection method.

Specim FX series cameras give reliable classification results based on the target's chemical composition. Non-contact, non-destructive optical method offers 100% imaging coverage. Inspect variety of end products and different system properties without changing the camera.

SPECIM FX SERIES BENEFITS

Specim FX series cameras are the first hyperspectral instruments designed specifically for industrial use. Cameras' high frame rate meets the industry speed requirements, and robust structure and small size allow flexible installation location.

EASY INTEGRATION

Specim FX cameras can be installed on existing and new sorting lines. The material identification result, pixel by pixel, is available through a standard interface to commercial machine vision systems. Data analysis results are communicated to the sorting machines, such as robot hands or air jet, through commercial machine vision solution softwares.

UNIFIED, COMPARABLE DATA

Unified wavelength calibration between individual Specim FX cameras guarantees that the data received from different units is comparable. Different units in one system work seamlessly together, and extending the system by adding cameras is easy - there is no need for calibration.

FOCUS ON THE RELEVANT

The multiple region of interest (MROI) feature allows focusing on the areas that are relevant, which reduces the amount of recorded data. The MROI areas can be flexibly selected and even changed on the fly, based on the application needs.

FIRMWARE UPGRADABLE

Get the latest version of Specim FX firmware and update the camera onsite, quickly and easily, with the software package provided by Specim.

REAL PARTNERSHIP
WITH EXCELLENT RESULTS

Specim can offer you a continuous, long term partnership that will help you get the most out of your imaging system.

WE OFFER YOU:

The opportunity to gain real competitive advantage by using the cutting-edge technology for non-contact, non-destructive chemical imaging.

Access to the largest product portfolio including instruments for both laboratories and industrial applications, covering all regions from 400 to 14000 nm.

High volume production capability with strong and professional technical support.

Specim inhouse expertise:

- Scalable production, maintenance, calibration and repair services
- Superior knowhow in optics, electronics, software and mechanics
- Strong team to solve application related challenges
- Sample measurement and feasibility services

SPECIM FX10

VNIR

Specim FX10 camera series is designed for industrial and laboratory use. Specim FX10 cameras work in a line-scan mode in the visible and near-infrared (VNIR) area; Specim FX10 in the 400-1000 nm region, and the color optimized Specim FX10c camera in the 400-780 nm region.

SPECIM FX10 CAMERAS ARE BEST SUITED FOR:

- Vegetation & agriculture
- Phenotyping
- Color & density in printing
- Display & light source inspection
- Food quality

SPECIM FX17

NIR

Specim FX17 camera is designed for industrial and laboratory use. It works in a line-scan mode, and collects hyperspectral data in the near-infrared NIR region (900 to 1700 nm).

SPECIM FX17 IS BEST SUITED FOR:

- Food & feed quality
- Waste sorting
- Recycling
- Moisture measurement
- Threat detection, Security

SPECIM FX50

MWIR

Specim FX50 is a high-speed, accurate and efficient camera specifically designed for industrial environments. It works in a line-scan mode and collects hyperspectral data in the Medium Wavelength Infrared (MWIR) region (2.7-5.3 µm).

SPECIM FX50 IS BEST SUITED FOR:

- Black plastic sorting
- Geology & mining
- Metal industry

SPECIM FX SERIES

TECHNICAL SPECIFICATIONS

	SPECIM FX10	SPECIM FX17	SPECIM FX50
Spectral Range	400 – 1000 nm	900 – 1700 nm	2.7 – 5.3 µm
Spectral Bands	224	224	154
Spectral FWHM	5.5 nm	8 nm	35 nm
Spatial Sampling	1024 px	640 px	640 px
Frame Rate	330 FPS with full frame 9900 FPS with 1 band selected	670 FPS with full frame 15 000 FPS with 4 bands selected	380 FPS (Full image with default binning)
FOV	38˚ (Other options available)	38˚ (Other options available)	24˚/ 45˚/ 60˚
F-number	F/1.7	F/1.7	F/2.0
Camera SNR	600:1	1000:1	1600:1 (Dynamic range with 1.5 ms integration time)
Camera Interface	GigE Vision, CameraLink	GigE Vision, CameraLink	GigE Vision, Custom ethernet
Dimensions	150 x 85 x 71 mm	150 x 85 x 75 mm	280 x 202 x 169 mm
Weight	1.26 kg	1.56 kg	7 kg
Integrated shutter	Yes	Yes	Yes

LEARN MORE:
WWW.SPECIM.FI/FX