



## BLACKINDUSTRY VNIR Sensor



HAIP Solutions BlackIndustry VNIR Sensor is a smart line scanning (push-broom) visible and near-infrared hyperspectral imaging camera that allows the acquisition of real-time spectral data with very high spatial resolution.

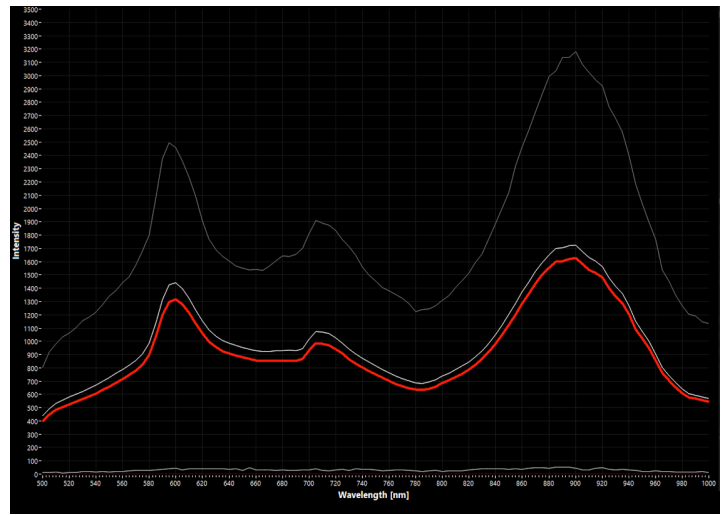
The outstanding sensitivity in the NIR range from 500 nm to 1000 nm is perfect for the use in industrial in-line applications. With a frame rate of 540 Hz at full frame and up to 1000 Hz at ROI, the sensor is suitable for high conveyor belt speeds, ideal for sorting applications in Food Industry or Recycling.

### Features

- Smart Hyperspectral Line-Scanner
- Designed for industrial in-line applications
- VNIR (500-1000 nm)
- High Signal-to-noise ratio in NIR range
- 100 spectral bands (selectable)
- Spatial resolution: 960px
- Framerate 540 Hz (Full Frame)
- Internal GPU for pre-processing



Broadband LED lighting bar - BlackBright  
Optimised for combined use with BlackIndustry



BlackIndustry - Spectral response

Spectral Properties	
Wavelength range	500-1000 nm
Number of bands	100
Spectral resolution	5 nm
Spectral sampling	5 nm
Spatial Properties	
Resolution	960 px
Sensor Properties	
Detector	CMOS
Radiometric resolution	14 bit
Framerate (Full Frame)	540 Hz
Framerate (ROI)	Up to 1000 Hz
Slit width (default)	25 µm (others on request)
Camera Properties	
Lens mount	Standard C-Mount
Connection	GigE
Temperature (Operation)	-10 - +50°C
Temperature (Storage)	-20 - +65°C
Protection class	IP 40
Size	90 * 90 * 122 mm
Weight	1.300 g

## Individual pre-processing

Additional data pre-processing on camera is possible, as the camera has an integrated GPU (Nvidia Jetson). BlackIndustry is controllable and readable via a GUI or API. Dedicated software packages are available for various user requirements.

Combining superior optical design with advanced holographic transmission grating technology, highend electronics and a sensitive CMOS detector, BlackIndustry camera is an ideal tool for demanding environments.

The hyperspectral sensor provides a spatial resolution of 960 pixels with 100 spectral channels to be read in, within the wavelength range from 500 nm to 1000 nm. The desired spectral ranges can be individually selected.

A special rugged housing is also available with higher IP ratings to ensure robustness depending on your needs. If you need external lighting, BlackBullet is optimised for combined use with separate broadband LED lighting bar BlackBright.