



High-performance imaging software for the industrial automation of machines, production processes, data processing workflows, and remote sensing applications. Offers a wide range of image processing algorithms, including the execution of state-of-the-art computer vision (AI) models. Optimized to run in real-time scenarios with short latencies, high data throughput and reliability. Available in bundles for specific automation tasks such as industrial inspection, continuous monitoring and product sorting, or customized to include the required functions.

Installation	Platform	Distribution	Sensors	Solutions
Local Server	Win OS	Library Package	Mono / RGB	Sorting
Cloud / VM	Linux OS	Runtime Package	Hyper-spectral	Monitoring
@Kestrel Eye	ARM Platform	Docker Image	Depth / 3D	Inspection
				Custom

Vega is available for various installation locations, platforms and provided in ready-to-use deployments or as custom solutions.

Functionalities offered

Data acquisition: Streaming of data from sensors of different formats including sensor and illumination triggering and control

Data pre-processing: Preparation of (image) data for processing, including ROI extraction, stitching, stream fusion, de-noising, rectification and balancing

Image processing: Several AI-based and non-AI algorithms including

- Object Generator to extract and analyze objects
- High-end AI-models for classification, regression, object and anomaly detection
- Fast hyperspectral models for classification and regression of spectral data
- 3D point cloud processing
- Feature extraction, similarity and duplicate detection

Data recording: Record of raw and processed data streams and processing results

Industrial interface: Connect software to control systems and PLC's, operate as state machine

Bundles and use case examples

Vega Sort: Suitable for sorting machines (e.g. band and free fall sorters). Image processing is extended with the generation of sorting signals with lowest latencies

Vega Guard: For continuous production or scene monitoring (e.g. endless production, error / defect / anomaly detection) with high data throughput

Vega Inspect: Inspection of products or scenes in non-continuous scenarios (triggered inspection)

Vega Flex: Complete customized solution

Key benefits

Computing performance: Highly optimized software is capable for demanding tasks in terms of processing times and accuracy

Hyperspectral processing: Handling and processing of hyperspectral data with top-notch AI models

Resource-efficient: Reduced hardware needs saves hardware needs and energy consumption

Customization: Provision of custom solution including commissioning support and continuous support

Software packaging

Vega is delivered as a library (for system integrators), stand-alone solution (end users) or API (processing workflows).

System requirements (recommended)

Platform	Win11, Linux, ARM / embedded, cloud
CPU	Intel, AMD, ARM
GPU	Nvidia
RAM	8+ GByte

Contact

For product demos and enterprise enquiries:
contact@kestrel-eye.com | www.kestrel-eye.com