Discover the ready-to-use scanning system for hyperspectral imaging: BlackIndustry Station

Developing and validating hyperspectral imaging applications requires controlled measurement conditions and reliable data acquisition. However, setting up a complete measurement system with cameras, illumination and sample movement can involve considerable integration effort.

This year HAIP Solutions has introduced the BlackIndustry Station, a ready-to-use scanning system designed to simplify hyperspectral data acquisition and analysis. By combining the essential components in a compact setup, the station provides a controlled environment for feasibility studies, application development and at-line inspection in industrial and research applications.

Controlled measurements with minimal setup effort

The BlackIndustry Station integrates a motorised linear stage, camera mounting and illumination into a single system. With adjustable stage speeds from 1 to 370 mm/s, it enables reproducible line-scan measurements under defined conditions.

Two integrated BlackBright Fast Medium Wave IR (FMWIR) illumination units provide focused and uniform illumination optimised for hyperspectral imaging in the SWIR range. Combined with the controlled sample movement, this ensures consistent acquisition conditions for evaluating materials and developing classification models.

The station is designed for straightforward operation. Camera configuration, illumination and stage movement can be managed through an integrated touchscreen, web interface or HAIP Solutions' BlackStudio software, reducing the need for complex system integration.

From laboratory analysis to industrial applications

Beyond laboratory measurements, the BlackIndustry Station provides a platform for testing hyperspectral inspection workflows under conditions relevant to industrial applications. Its adjustable scanning speed allows users to investigate different acquisition parameters and simulate aspects of conveyor-based processes before integrating hyperspectral technology into production environments.

The system supports HAIP Solutions' BlackIndustry camera series and can be configured for combined RGB and SWIR imaging with an additional BlackBright RGB LED illumination unit.

With its compact dimensions of 530 × 580 × 640 mm, the BlackIndustry Station is suitable for both laboratory and industrial environments. By bringing data acquisition, analysis and application development into one system, it provides a practical starting point for evaluating hyperspectral imaging in applications such as material classification, quality inspection and sensor-based sorting.

More information here: https://www.haip-solutions.com/hyperspectral-cameras/blackindustry-station/

About HAIP Solutions GmbH

HAIP Solutions GmbH, based in Hannover, Germany, develops integrated hyperspectral imaging solutions for industrial and research applications. The company’s portfolio includes hyperspectral cameras covering VNIR to SWIR ranges, application-specific illumination systems and software for data acquisition and classification. HAIP focuses on delivering reliable, application-ready systems that simplify the use of hyperspectral technology in real-world environments.