High-Magnification **TDI Line Scan** Inspection

pco.®

OPTEM®

X-Cite®

pco.horizon 9.1 bi TDI CLHS

Line Scan Camera

X-Cite XYLIS™ II

LED Illumination

Optem® mag.x 125

Micro-Inspection System

excelitas®

About the Demonstration

This demonstration showcases a cutting-edge TDI line scan camera, LED illumination and a widefield modular microscope system, together with a powerful software application. The pattern printed on a rapidly moving roll is captured in real time by the camera. Image acquisition is synchronized with the material's movement, enabling precise, high-speed inspection and immediate data analysis. This setup demonstrates how TDI technology boosts sensitivity and image quality in motion-based inspection.

pco.horizon 9.1 bi TDI Line Scan Camera

Our TDI line scan camera delivers exceptional sensitivity and high image quality for ultra-precise, high-speed inspection tasks. Its back-illuminated, temperature-stabilized sensor, featuring a photo-sensitive band with 256 stages, provides consistent, accurate images even in demanding environments.

KEY FEATURES

- Line rates up to 600 kHz
- 9K resolution with 5 µm pixels
- Large-format sensor: 45 mm width
- Fast data transfer via CLHS FOL

Optem mag.x 125 Micro-Inspection System

This optical system combines microscope-like resolution with wide fields of view for large-format sensors up to 57 mm. Its highly flexible, modular design allows configurations ranging from simple optical setups to fully equipped systems with coaxial illumination and closed-loop autofocus.

KEY FEATURES

- High-contrast, distortion-free imaging
- Submicron precision
- Rapid laser-based autofocus
- Uniform image quality across entire FOV

X-Cite XYLIS II LED Illumination System

This broadband LED light source delivers powerful excitation from DAPI to Cy7. While offering the reliability, longevity, and ease of modern LED technology, it matches the brightness of traditional arc lamps. Its flexible design ensures seamless compatibility with virtually any imaging system.

KEY FEATURES

- Broad spectral coverage
- Whisper quiet operation
- Flexible control options
- Low maintenance and mercury free

In cooperation with:

MVTec HALCON Software

This is the comprehensive standard software for machine vision. Its flexible architecture enables fast development of diverse applications, powered by high performance, deep learning, and 2D/3D technologies. It integrates easily and supports a broad variety of platforms and industrial standards.

KEY FEATURES

- Comprehensive vision library
- Multi-core, SIMD & GPU support
- Broad compatibility with cameras
- Embedded and customized systems

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