DESION

DEFIS
FABRIC INSPECTION SYSTEM

Supported Materials

- Knitted fabrics
- Braidings
- Gauze
- Faux leather
- Tubular fabrics
- Laminated/coated fabrics

Following characteristics can be detected by our system:

- Stain defects (e.g. oil, particles, foreign fibers)
- Wrinkle detection
- Streak detection (e.g. double picks, reed or hook marks)
- Holes and cracks
- Deviation from pattern (e.g. warps, mesh geometry)
- Deviation in coating

Our Service

The DESION Inspection Systems reliably and precisely recognize properties of complex objects and different materials in your production. We develop custom systems for your specific use case following industrial standards.

DESION GMBH
CAMERA BASED INSPECTION SYSTEMS
FOR FABRICS AND COMPLEX OBJECTS

Our portfolio includes:

- Adaptation of our products to your production
- Consulting and feasibility studies
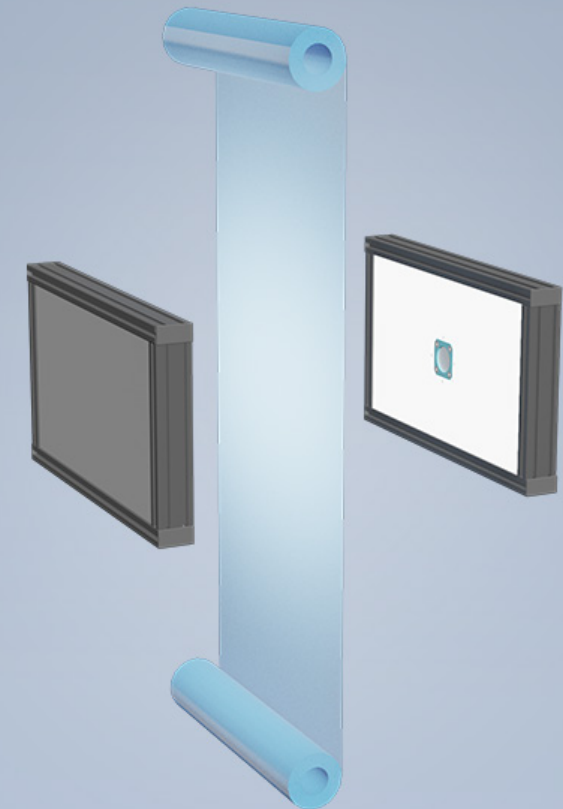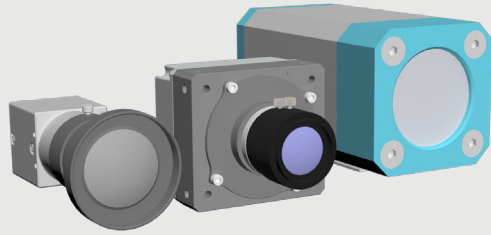- Custom software and hardware development

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The DESION Fabric Inspection System

Defis is a camera based fabric inspection system. It detects visible faults in patterned and uniform fabrics using computer-vision. Defis guarantees a high and consistent product quality during manufacture and optimizes process efficiency.

What Does Our Technology Accomplish?

Defis Inspection System consists of a hardware unit, the control software, an interface module and the inspection module. Due to our open data structure, inspection results can be processed either through our interface module or by a third party control software. Defis is developed for the open source Linux operating system and runs on common x64 systems.

The Hardware Unit

The hardware unit consists of a individually customized camera and light combination. We provide different technologies like area scan or line scan cameras and make use of multiple light spectrums to perfectly fit your needs. Our hardware is IP67 rated for operation in harsh industrial environments. The unit is controlled via Ethernet, so that the processing of the aquired image data by the inspection software module can take place locally or remotely in a data center or even in the cloud. A local computing unit is tailored by us to your application and is delivered in 19" server

Examples of Defects

Defect
Needle lines

Defect
Wrong yarn

Defect
Missing yarn lines
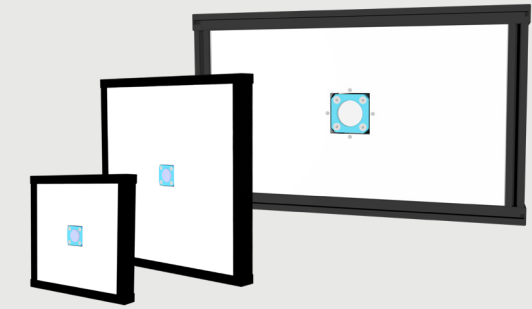
format. Depending on the requirements, web material with a width of a few cm up to 3m can be inspected.

Interface Module

The Defis Interface Module provides the control of the system via fieldbus network or a web service. Multiple protocols are available. Nagios is supported as remote monitoring software.

Inspection Module

The Defis Inspection Module is the vision component of the system. It processes the camera images and makes the decision about the occurrence of defects. The Defis model is a learning system. Which defects to detect and respective detail settings can be refined by the customer over time. New defects can be added and thresholds for exisiting ones can be adjusted anytime.

Our Flexibility to Your Advantage

The development of both our customers and our business is a continuous process. Our inspection systems grow with the needs of the customer and with the speed of technological developments. Our software is scalable, flexible and always customizable.

We will be happy to advise you on your individual application.