CP-VIEW S

«SELF-LEARNING» VISUAL INSPECTION MODULE

CHALLENGE

- The industry is becoming increasingly demanding in terms of product aesthetics. Some complex materials and textures are still inspected by operators, resulting in a decline in profitability and quality.

SOLUTIONS

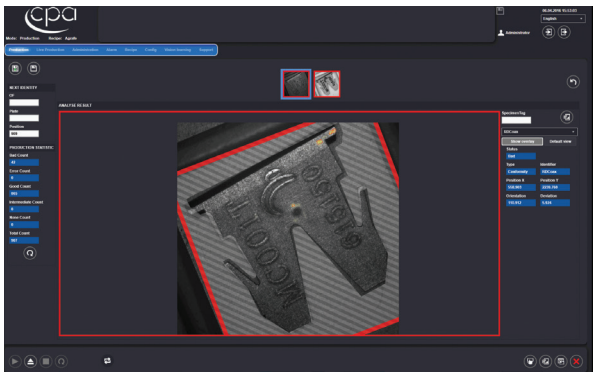
- Unique turnkey vision system equipped with «self-learning» technology.
- Unique solution, capable of assisting or replacing manual inspection.
- It offers automatic or semi-automatic checking stations.
- How does it work?
  1. Teach the system good and bad examples for reference (~30 min).
  2. Allows the system to “self-learn” how to create its reference models (~30 min)
  3. Start production; the system will detect anomalies.

GENERAL SPECIFICATIONS

Software	**ViDi Suite + industrial interface with CPA software tools**
Communication	**TCP / IP – Protocol based on digital I/O**
Inspection time	**50 to 1500 ms**

FEATURES

- **Localisation**
  Identify and locate single or multiple features in an image.
- **Anomaly detection**
  Detects any quality defects.
- **Classification of objects and scenes**
  Classifies an object or a scene.
- **OCR**
  Character recognition technology (extreme OCR)



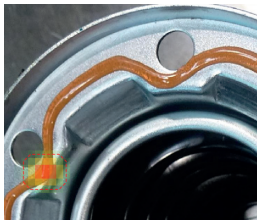
Screenshot of visual inspection software

ADVANTAGES

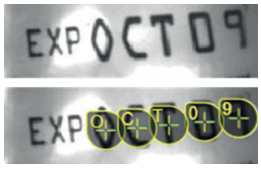
- Easily integrated into any machine or production line (compatible with Factory 4.0).
- Very complicated to program up until now, the inspection and the classification of material and of textures has become much easier and the possibilities are endless.
- Exceeds the expectations of the best quality controllers.
- Fast configuration by any operator.
- The consistency of the evaluation criteria can be controlled (reproducibility).
- The life cycle is shortened. Enables product traceability.

RESULTS

- **Visual inspection**
  - Watch components
  - Welding/micro-welding
  - Injection-moulded plastic parts
  - Materials in continuous flow
  - Food products
  - Medical implants
  - ...
- **OCR**
  - Series numbers
  - Production batches
  - Expiry dates
  - ...



Inspection of a sealing cord



OCR - expiry date

TECHNICAL DESCRIPTION

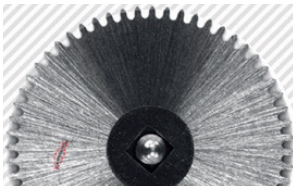
- The CP-View S unit consists of two main elements: **processing unit** and **I/O unit** (optional).
  - The processing unit is made up of high performance GPUs and features all of the necessary software and hardware for the automatic processing of your components.
  - The I/O unit integrates all hardware necessary for managing cameras, lights and in particular client processes.
- We offer a full range of components, software and services in order to respond to all of your needs:
  - various cameras, lenses and light sources;
  - fixing materials and cables;
  - GPU and software modules;
  - technical support and assistance provided by our engineers.

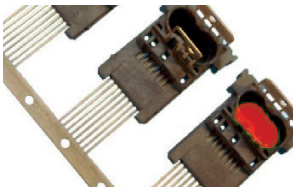
EXAMPLES OF APPLICATIONS

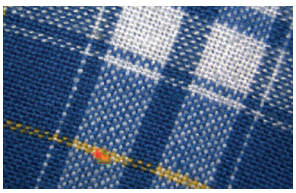
Visual inspection

Printing


Food products

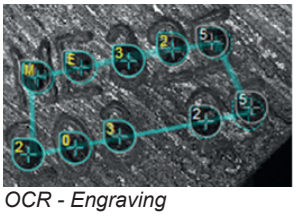

Mechanical parts


Strip products


Textiles


Products sold in blisters

Optical character recognition


OCR - Engraving


OCR - Overprint

SPECIFICATIONS

GENERAL SPECIFICATIONS

"Deep Learning" technology
Easily integrated into existing production lines and processes
Fully configurable
Remote control
HMI Industrial
SQL Integrated Database
OPC Unified Architecture

PROCESSING UNIT
Software & Hardware for image processing

Format	19" 4U x 480 mm
OS	Win 7 64 bit
Processor	Bi-Xeon E5-2620 v3 12 cores
RAM	16GB (2x 8GB) DDR4 ECC REG memory
Hard disk	1x SSD 256GB, 2x HDD 2TB 24x/7
GPU	NVidia (various options available)
Number of cameras	up to 4
Camera with built-in supports	USB & GigE (standard IDS and other cameras optional)
USB3.0	3x front side, 4x rear side
Power supply	1200 W
Volume	45 dB
Weight	22 Kg

I/O UNIT
Interface with peripherals

Front sie


Rear side

Format	19" 2U x 480 mm
Programmable output 2A for lighting (DO)	4x 24V / 2A
Programmable output potential-free (DO)	2x 3V...33V / 3A
Camera power supply	4x 12V / 24V / 1A
Analogue output	4x 0V…10V / 0.1A
GPIO	16x DI 24V + 24x DO 24V / 0.5A