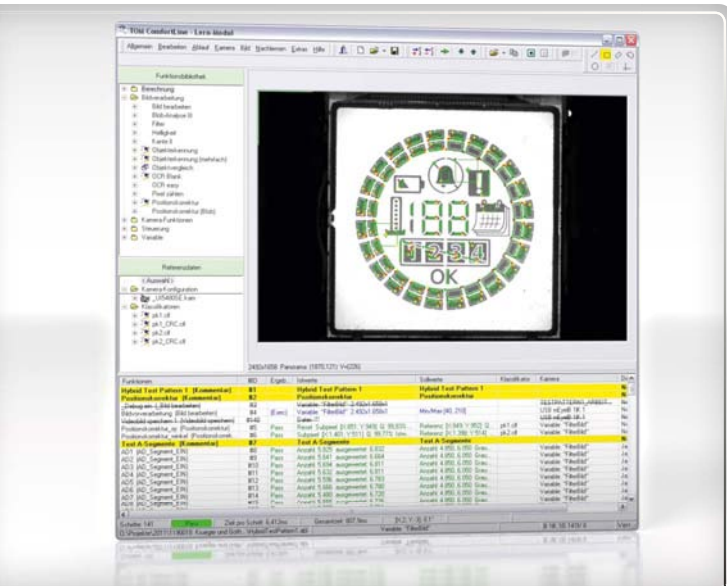


TOM Line™

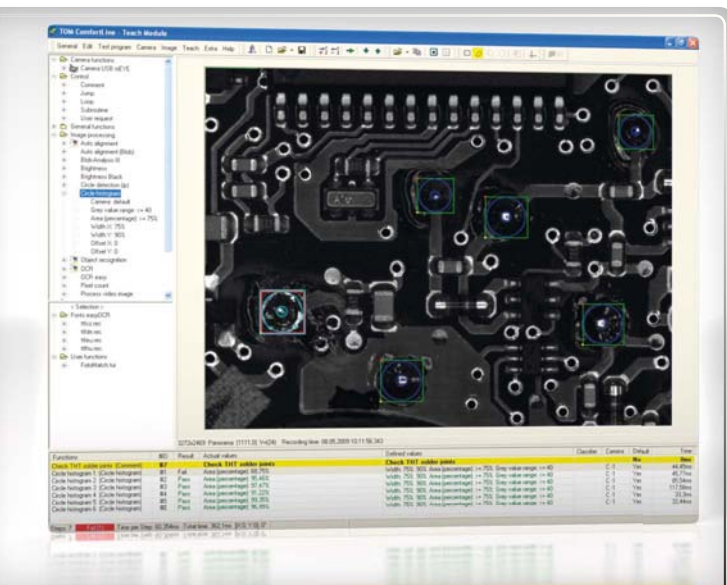
Industrial Image Processing Software
and System Solutions



Industrial Vision Solutions Software



LC display test



Selective solder joint inspection



ID card inspection

TOM Line™ Software

- Powerful image processing software for industrial application
- Generation of complex test programs without programming knowledge



Proven

- Since 1996 more than 500 TOM Line systems are globally in industrial use



Efficient

- Rapid, intuitive inspection program generation without any programming knowledge



Modular

- Compatible with all common camera interfaces
- Freely extendable for multi camera applications



PC based

- Windows compatible image processing software
- Optimised for multi threading



Flexible

- Customer programmed software algorithms via UI
- Remote controllable per RS232, Ethernet or DIO



Universal

- Comprehensive range of practical test functions

TOM Line™ Options

easyOCR™ Europe

Unique algorithm for intelligent pre-processing and reading of European fonts with no need for pre-training of any classifier

easyOCR™ Asia

Unique algorithm for intelligent pre-processing and reading of Asian fonts with no need for pre-training of any classifier

easySymbolMatch™

Tool for automated generation of symbol recognition classifiers based on synthetic image data (e.g. layout from a Photoshop file)

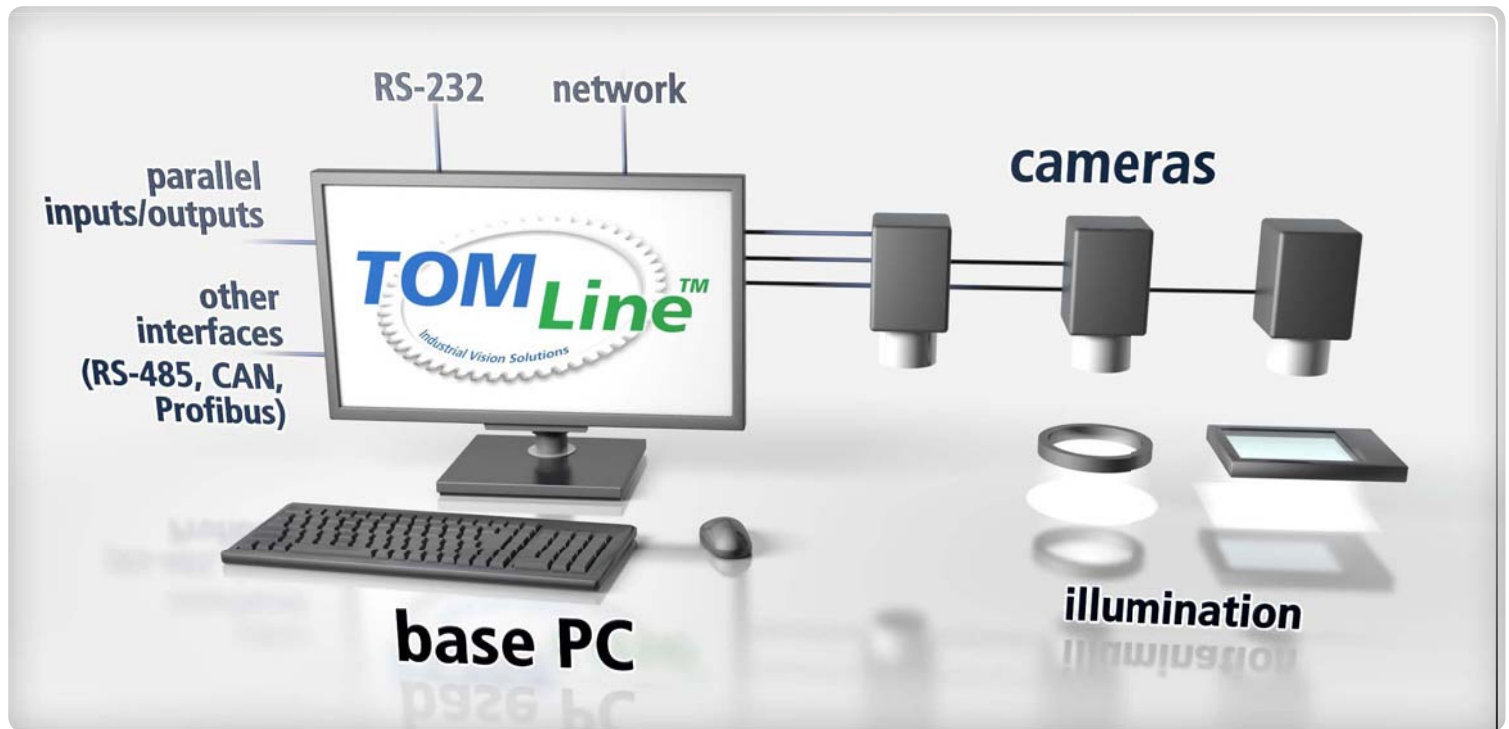
easyPhotoMatch™

Tool to compare passport photographs and hologram images on identification documents with image data from a database

Automotive Package

Includes powerful test functions to inspect instrument clusters and head units: static/dynamic recognition of tachometer needles, switching time of symbols, interaction with the CAN bus system

Industrial Vision Solutions Engineering



TOM system architecture

TOM Line™ System Solutions

The modular system concept includes image recording, lens and illumination components, an industrial PC as well as the TOM image processing software.

Utilising a multitude of supported interfaces, the entire system can ideally be integrated in an industrial environment. The modular hardware set-up and the opportunity to parameterise and adjust test runs provides maximum flexibility for changing test requirements.

One-stop Image Processing Expertise

Project planning

- Feasibility studies
- System conception

Implementation

- System setup
- System integration
- System test

Training /service

- Onsite training for Personnel
- Maintenance and instructions

Additional services

- Application consulting
- Application assistance for in-house integration
- Execution of customised tests
- Development of user functions



TOM Selective-Line for selective solder joint inspection



TOM Automotive Package



TOM easyOCR™



TOM In-Line

Application Examples

- Brightness and colour check of LEDs
- Check of LCDs
- Data reading and verification on plastic cards and letters
- Selective solder joint inspection
- Check of connectors
- Check of laser labelling on plastics
- Measurement and breaking edge check of ceramic substrates
- Data matrix and barcode reading
- Adhesive bead check
- Reading and calibration of indicator instruments
- UV protective paint check

Systems based on TOM Technology

TOM Selective-Line™

Easy-to-integrate module for selective solder joint inspection

TOM Combi-Line™

Optical inspection system for vehicle instrument clusters

TOM In-Line™

Cost-efficient optical inline test system

PINspecter™

Module for checking correct geometric position of connector pins

SurfaceInspect™

Surface inspection of ID, bank and debit cards

References

More than 500 installations around the globe in development, production and quality assurance areas of well-known enterprises in industry segments such as:

- Automotive and supplier industries
- Electronics industry
- Medical technology
- Solar industry
- Telecommunication industry
- Production of ID, bank and debit cards