Image processing with
VisionLine for marking

Keeping an eye
on everything

01
Easy operation

02
Modular setup

03
Always in focus

TRUMPF

01

Easy operation
Systematic user guidance through individual work steps

Using the intuitive user interface and predefined pattern library, it is easy to integrate VisionLine in the production process. Work can start after selecting just a few parameters and defining some component characteristics or the code to be read.

02

Modular setup
Optimal adjustment for every application situation

Assemble the right package from the VisionLine product series – consisting of Adjust, Detect, Model, Code and OCR – that is tailor-made to the requirements of your actual application. The hardware is always included: One camera is aimed through the scanner lens (on-axis), a second one is laterally aimed at the marking field (off-axis). The on-axis camera can find the correct marking position on the component. Thanks to the stitching function – which strings images together – you can even keep an eye on large components. The off-axis camera reduces the process time, as the entire marking field is captured in one camera image, making stitching unnecessary. There is also the option of selecting lighting – in the wavelength suitable for the respective marking laser.

03

Always in focus
Save time and money and still get maximum marking quality

The distance measurement function[1] provides support when setting the working distance. The objective of the on-axis camera can be focused on any position in the marking area on which the laser is concentrating. Focusing of the processing beam and the camera are independent of each other.

[1] Distance measurement function in the center of the marking field. Automatic distance correction only in combination with the TruMark Station 5000 or 7000.

Everything in view with the TRUMPF image processing solution VisionLine

VisionLine Adjust: Automatic distance measurement[1] for setting the laser focus

VisionLine Detect: Automatic distance measurement[1] and simple characteristic detection (for example, circles, lines, intersections)

VisionLine Model: Learning and detecting workpiece and object shapes in addition to distance measurement[1]. Ensures that the marking process is always carried out at the correct position

VisionLine Code: Automatic distance measurement[1] as well as reading and standards-based evaluation of bar codes and 2D codes

VisionLine OCR: Combination of distance measurement[1] to the workpiece and capacity to detect and read text

Further information on image processing solutions:
www.trumpf.com/s/image-processing

VisionLine, the TRUMPF image processing solution	
Available marking lasers	TruMark Series 3000/5000, TruMark 6030, TruMicro Mark Series 2000
Available focal lengths	f = 160 mm, f = 163 mm, f = 254 mm, f = 300 mm, f = 450 mm
Available marking work stations	TruMark Station 5000, TruMark Station 7000
Supported codes	BC412, Codabar, Code 39, Code 93, Code 128, EAN 8, EAN 13, EAN 4, GS1-128, GS1 Databar, Industrial 2/5, Interleaved 2/5, UPC-A, UPC-E, Data Matrix, QR, Aztec, PDF417, Maxicode
Supported optical characters	System Font (e.g. Arial, Calibri, Cambria, Courier, Times New Roman), Machine Font (e.g. OCR-A, OCR-B, Helvetica)
The smallest readable module size	30 µm[2]
Typical image processing time	200 ms[2]
Typical position recognition accuracy	30 µm in the image center, 60 µm at the edge of the image[2]

[2] Depending on type of objective and lighting.
Subject to alteration. Only specifications in our offer and order confirmation are binding.

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