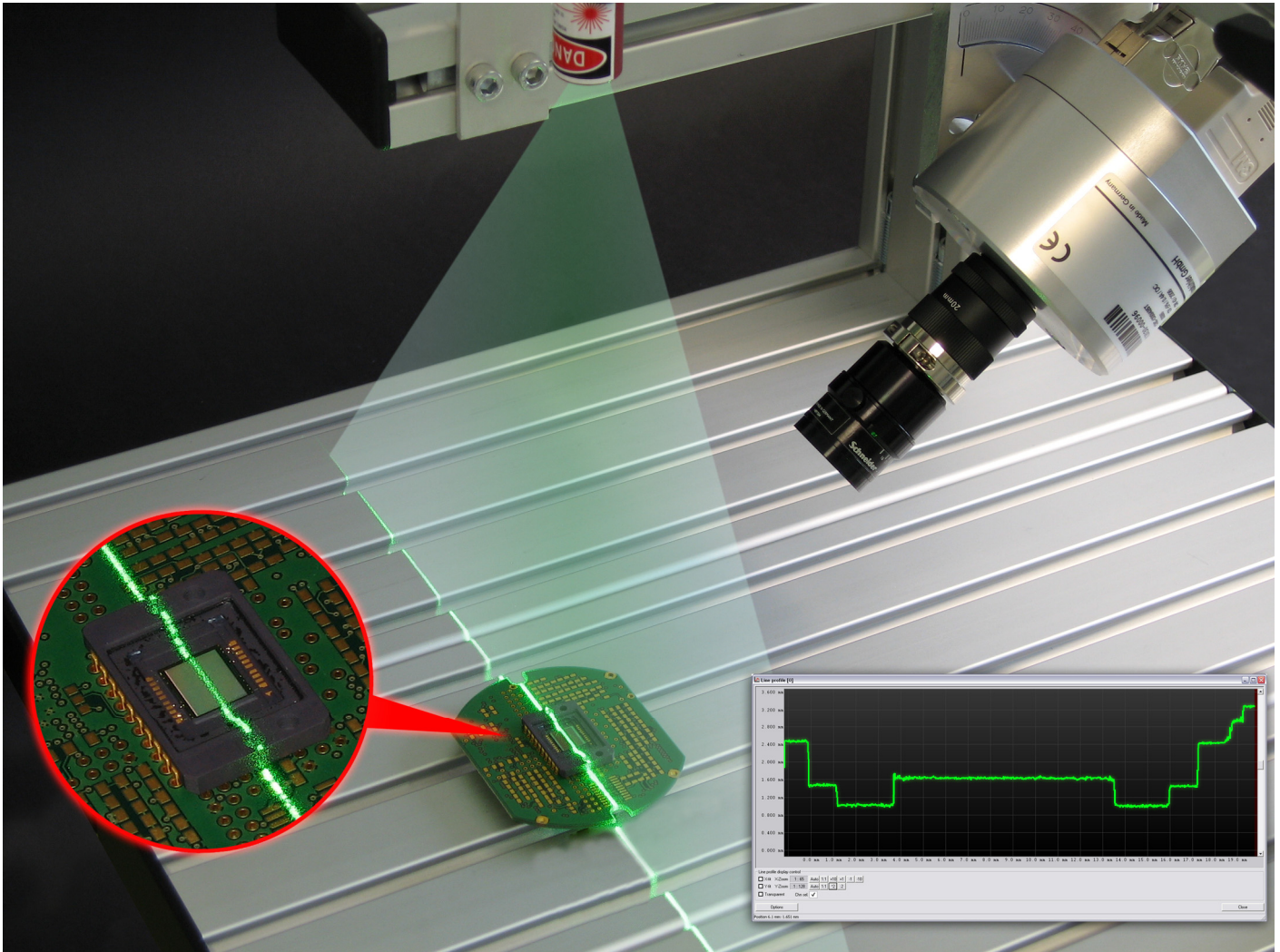


ZPS-1000

Fast 2D / 3D Line Profile Sensor



Features

- 2D / 3D Line profile sensor
- High Scan rates from 500 Hz up to 2 kHz (1 kHz at 500 pixels / line)
- Adjustable Z-measuring range
- Resolution: ± 0.05 % of the Z-measuring range
- Measuring accuracy: ± 0.2 % of the Z-measuring range
- Data output directly in mm (32 bit floating point)
- Flexible use for a wide range of applications

The line profile sensor **ZPS-1000** is based on a very fast VDS Vosskühler CMOS camera, which internally calculates and output the Z-coordinates along the line profile.

The acquisition of the height profile takes place according to the triangulation principle by means of a laser, which projects a laser line onto the surface of the object to be measured. The diffused reflected light from the laser line is recorded on the CMOS-Sensor and evaluated in two dimensions, X and Z.

Even with moving objects 3-D presentations are possible.

In case of moving profiles high accuracy is achieved for each complete profile due to the use of scan rates up to 2000 Hz with 250 pixels per line.

The Z-coordinates are determined and calibrated internally in the camera and are output as 32 bit floating point values directly in mm.

The data can be transferred to a PC via Camera-Link or as an option via Gigabit Ethernet.

The geometry of the measuring field (height Z and width X) can be varied and adapted to the respective measuring application.

Owing to the internal determination and calibration a compact and easily applicable line profile sensor is available for the user.

Furthermore the user additionally becomes supported by several software tools, as e.g. by a calibration program, a profile- and a waterfall display.

The **ZPS-1000** is available as OEM version or as a complete sensor with line laser, lens and fixing tools.

Applications:

- Profile check whilst production
- Control of glue cover
- Check of welds
- Examination of SMD components, soldering paste cover in assembling machinery
- Height measuring at mechanical components of each type
- Improvement of image analysis procedures by means of the height information
- Rail inspection

Technical Data

- Scan rates: 500 Hz at 1000 pixels / line
1 kHz at 500 pixels / line
2 kHz at 250 pixels / line
- Z-measuring range according to lens and laser
- Resolution: approx. ± 0.05 % of the Z-measuring range
- Measuring accuracy: approx. $\pm 0,2$ % of the Z-measuring range
- Optimized for lasers with 532 nm (green)
- External trigger facility (e.g. from an encoder)
- Data format: 32 bit floating point in mm
- Data output: Camera-Link (Base) or Gigabit Ethernet (Option)
- Power supply: + 12 V (SELV), max. 0.5 A
- Ambient air temperature: 0 – 40° C
- C-mount lens connection
- CE Standard
- Made in Germany