

## Customer reference / Case study

# THT AOI system with feedback and high failure detection



METREL d.o.o., based in Horjul, Slovenia, is an established manufacturer of electrical measuring and testing equipment with its own development department and accredited calibration and repair departments. METREL primarily serves the industrial and laboratory segments with these products.

[www.metrel.com](http://www.metrel.com)

## The challenge

As a manufacturer of measuring and testing devices, METREL's customers, most of whom are located in sensitive areas such as laboratories or system-relevant industries, pay particular attention to high reliability, compliance with international safety standards and consistent quality. With an AOI system, failures in the THT production process should be detected early, repeatably and seamlessly. While the system should offer maximum inspection performance, it should also not become the bottleneck of the production line.

## Solution

METREL decided to use a THT AOI system to maintain traceability, shorten the time for the test cycles and ensure high accuracy and repeatability. The Multi Line 3D from GÖPEL electronic was chosen because this system offers significant advantages, especially for the measurement technology manufacturer: Firstly, the leading technology and equipment with the 3D camera head ensures the best inspection quality currently achievable. In addition, the system can also be used for SMD inspection if required.

One key aspect was the automatic component return offered by the Multi Line system from GÖPEL electronic. This allowed the AOI system to be ideally integrated into METREL's production layout. The Multi Line is currently used for solder paste inspection before component placement and for optical inspection after reflow or wave soldering. The boards are checked for missing components, polarity errors, the presence and quality of solder joints and short circuits during production. The number of problems detected during the final quality check has been significantly reduced with the use of an AOI system.

### Application

Production of PCBAs  
for measuring and testing  
devices in low-volume/high-mix

### Field of application

3D inspection of PCBAs with  
feedback in the production line

### Products & Systems

Multi Line 3D - inline

### Equipment

2D camera module top  
3D camera module below  
PCBA return

### Software

PILOT AOI Version 7  
ResultLink  
PILOT Verify

### Cooperations

InterElectronic Hungary Kft.

### Installation

2025 by InterElectronic

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