

## New inline X-ray system for highly flexible and precise inspection

New X-ray system for handling oversized boards whilst maintaining high quality image capture: GÖPEL electronic will present the new fleX Line · 3D inline X-ray system at productronica 2021. The new AXI machine offers the user unrivalled advantages in terms of flexibility, precision and reliability. The variable belt conveyor can transport both small light and large heavy assemblies. In addition, the system is built around a fixed position DUT image acquisition technology. This provides image data without blurring during 2D, 2.5D and 3D X-ray inspection tasks.

The portfolio of modern electronic assemblies includes small and light assemblies on the one hand and very large and heavy assemblies on the other. Existing AXI systems for inspecting electronics are mostly designed to handle standard DUT sizes. They have limited capability in terms of both specimen transport and image acquisition. These AXI systems aren't usually flexible enough for the full range of inspection tasks presented by a modern electronic assembly process.

The new fleX Line · 3D, granite-based 6-axis system from GÖPEL, implements high speed movement of the image acquisition components with excellent repeatability. The fundamental concept is to hold the DUT at rest during the inspection process. For example, heavy boards can be inspected directly in the carrier frame - without an additional mechanism to hold them in place during image acquisition.

fleX Line · 3D can handle DUT up to 610mm (24") x 508mm (20") with a maximum weight of 15kg; an option provides the possibility of sizes up to 1200mm x 508mm. The inspection of loose DUTs and thin, flexible PCBs in carriers or blisters is equally possible. As a result, the user gets clear, repeatable and consistent 2D, 2.5D and 3D X-ray images providing maximum defect detection. For the first time, the system supports both line and area detectors as well as different X-ray sources. In this way, the AXI system is highly flexible in terms of DUT transport and image acquisition technology.

In a further development step, a concept for self-monitoring and calibration has been implemented. The fleX Line · 3D controls the quality of the image acquisition and warns when deviations are detected. In addition, preventive use-based maintenance suggestions are transmitted to the operator. In combination with the latest software technologies, the system fits into the world of Industry 4.0 and offers a completely new user experience with the touch-based machine software.

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*Image: Inline X-ray system fleX Line · 3D*

GÖPEL electronic is a leading provider of innovative test and inspection solutions for printed circuit board assemblies (PCBAs) and electronic devices and systems. The company is divided into four divisions:

- Automotive Test Solutions
- Embedded JTAG Solutions
- Industrial Function Test
- Inspection Solutions AOI·AXI·SPI·IVS

More information: [www.goepel.com](http://www.goepel.com)

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