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PRESS RELEASE

SAKI Corporation Develops New Automated X-ray Inspection System for XXL PCBs

Supporting quality assurance of XXL-sized PCBs for data center applications amid growing AI demand

Tokyo, Japan – September 10, 2026 – SAKI Corporation, an innovator in the field of automated optical and X-ray inspection equipment, is pleased to announce the launch of its new 3Xi-ZS1EX Automated X-ray Inspection (AXI) system, designed to support the inspection of XXL-sized printed circuit boards (PCB) increasingly used in data center applications.

As demand for AI-driven computing continues to expand, manufacturers are adopting larger and more complex PCB designs to meet increasing performance requirements. These assemblies present new inspection challenges, including board warpage, the need to inspect high-profile components such as press-fit pins, and maintaining high throughput in production environments.

The newly developed 3Xi-ZS1EX model addresses these requirements while maintaining SAKI's proven high-rigidity platform and inspection performance. The system supports XXL-sized PCB inspection within a compact machine footprint and delivers approximately 1.6 times higher takt time compared to previous SAKI models.

Advanced AXI Technology for Large and Complex Assemblies

The 3Xi-ZS1EX combines high-resolution 3D X-ray imaging with SAKIs proprietary AI-based image analysis technologies to support stable and repeatable inspection of complex electronic assemblies.

Key features include:

- **Automatic Board Warpage Correction**

Automatically compensates for board surface variations caused by PCB warpage, helping maintain inspection accuracy across XXL-sized PCBs up to 1000 x 690 mm.

- **High-Resolution 3D CT Inspection**

Enables enhanced visualization and inspection of tall components and complex internal structures through detailed 3D imaging.

- **AI-Enhanced Void Detection**

A newly developed AI algorithm helps reduce image noise and improve the detection of small voids and other hidden defects. The system automatically applies optimized inspection parameters to support stable and consistent inspection performance.

- **Compact Footprint with Increased Throughput**

Designed to support high-volume manufacturing environments by combining XXL-board capability, enhanced inspection performance, and improved line productivity within a space-efficient platform.

Supporting the Growing Demand for AI Infrastructure

Masaru Tamba, President and CEO of SAKI Corporation, commented: "With the rapid expansion of AI applications, the importance of data centers and related social infrastructure continues to grow. At the same time, printed circuit boards, particularly those for AI servers, are becoming larger and more sophisticated, creating new quality assurance challenges for manufacturers. The 3Xi-ZS1EX was developed to address these evolving requirements and support our customers in achieving stable, high-quality production. Through continued innovation in inspection technology, SAKI remains committed to contributing to the advancement of next-generation electronics manufacturing and the sustainable development of AI-driven society."

Yukinaga Sasazawa, who led the development of the 3Xi-ZS1EX, added: "As PCB designs for AI and data center applications continue to increase in size and complexity, manufacturers require inspection solutions capable of accurately visualizing internal structures while maintaining production efficiency. The 3Xi-ZS1EX was developed to address these challenges through advanced 3D CT imaging, automatic board warpage correction, and AI-assisted inspection technologies. The result is a solution that supports both high inspection quality and manufacturing productivity for XXL-sized assemblies."

Availability

Orders for the 3Xi-ZS1EX are scheduled to begin in October 2026.

For more information about the 3Xi-ZS1EX Automated X-ray Inspection System, please visit the SAKI product information page.

3Xi-ZS1EX

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About SAKI Corporation Since its inception in 1994, SAKI has led the way in the development of automated recognition through robotic vision technology. SAKI's 3D automated solder paste, optical, and X-ray inspection and measurement systems (SPI, AOI, AXI) have been recognized to provide the stable platform and advanced data capture mechanisms necessary for true M2M communication, improving production, process efficiency, and product quality. SAKI Corporation has headquarters in Tokyo, Japan, with offices, sales, and support centers around the world.

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