

## **Mek Launches the SpectorBOX X1: A Revolution in 3D THT Inspection**



**Mek (Marantz Electronics), a leader in Automated Optical Inspection (AOI) solutions, used last weeks' Productronica show in Munich to proudly introduce the SpectorBOX X series, a modular full 3D AOI system for THT solder joints and THT components.**

SpectorBOX X1 is an industry game-changer that redefines Through-Hole Technology (THT) inspection and can be used bottom-up for volume measurement of THT solder joints and pin height measurement, or Top-Down for a groundbreaking 150mm + clearance for 3D THT components measurement - making it the first compact 3D AOI system truly capable of inspecting THT solder joints and components with precision.

[SpectorBOX X](#) delivers direct volumetric measurements of solder joints from Selective, Wave, Robotic, Pin-in-Paste Reflow, Laser and Manual soldering systems in addition to accurate pin height measurement. Drawing on Mek's extensive experience in THT soldering measurements, this compact 3D modular AOI offers an impressive high clearance of 150mm (5.9") and beyond on the THT components side and over 100mm (3.9") on the THT solder side to accommodate most conveyor designs. The X, Y and Z-axis moving optics ensure inspection of most pallet designs.

With effective shadow and high reflection suppression, along with high repeatability rates in 3D volumetric measurements, the SpectorBOX X1 redefines quality control standards, all

while maintaining a highly competitive price point. Its compact design, separate control box, and I/O options make it easy to integrate into existing conveyor systems.

In THT assembly lines, where custom-built solutions and handling systems for dedicated products are the norm, standard SMT AOI machines fall short due to size, weight, clearance, and environmental conditions. Mek's modular SpectorBOX platform offers a customizable solution, making it adaptable to the unique production environment. Many integrators have already successfully incorporated Mek's modular AOI into complex THT production lines.

Complementing the SpectorBOX is the [Mek VeriSpector AOI](#), which provides manual assembly guidance and inspection, creating a comprehensive THT inspection solution for the entire assembly process. Mek's [Catch system](#) streamlines the transfer of inspection data for repair, statistical process control (SPC), monitoring, and communication with Manufacturing Execution Systems (MES), managed by IT departments beyond the factory floor.

Mek is a globally recognized leader in Automated Optical Inspection (AOI) solutions, committed to delivering innovative technology that empowers electronics manufacturers to achieve the highest levels of quality and reliability in their products. With a history of excellence and a focus on customer satisfaction, Mek continues to drive the industry forward with cutting-edge solutions.

For more information visit <https://marantz-electronics.com/modular-aoi-spectorbox/>

### **About Mek (Marantz Electronics Ltd)**

A former division of Marantz well known for its high-quality Audio/Video products, Mek Japan (Marantz Electronics Kabushiki Kaisha), developed its first AOI system in 1994. Developed to inspect PCB assemblies for correct component placement and soldering, the company's original AOI system was designed for use in Marantz factories. Proving to be a highly successful, cost-effective alternative to traditional human inspection, Mek developed its first-generation commercial system in 1996. With a steadily growing installed base, MEK Japan and its European/American headquarters, Mek, have sold over 8000 units worldwide to date. Well established as a leading force in AOI technologies and 5D post-print SPI systems, the company

now also manufactures Conformal Coating Inspection systems drawing on the proven technology.

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