

A True ONE-Stop Inspection Solution – from Back-End Semiconductor to PCB Assembly



October 24 2016 – ViTrox Technologies designs and manufactures innovative, leading-edge and cost-effective automated vision inspection equipment and system-on-chip embedded electronics devices for the semiconductor and electronics packaging industries.

As the technology trend is becoming more advanced, all sorts of digital products are being invented and launched into the market. People are depending on digital products in daily life, including smartphones, smart cars, etc. In order to ensure competitiveness, digital product manufacturers have to rely on inspection systems to secure their product quality.

At ViTrox, you can look for different types of inspection solutions, from back-end semiconductor, such as Vision Inspection Systems, Tray-based Vision Handlers to PCB assembly, for instance, Advanced Solder Paste Inspection Systems (SPI), Advanced Optical Inspection Systems (AOI) to Advanced X-ray Inspection Systems (AXI). ViTrox offers a full range of solutions, from component level inspection to board level inspection.

ViTrox's Vision Inspection System and Tray-Based Vision Handler inspect a wide range of IC packages, such as BGAs, QFNs, QFPs, CSPs, SOPs, SOICs, TOs and so on. ViTrox's Tray-based Vision Handler is designed with advanced key technologies to provide a high-speed, high accuracy, one-stop vision inspection solution specially catered for different types of packages handled in tray. By having these vision inspection solutions, manufacturers can ensure high quality IC packages.

On the other hand, ViTrox's V310i Advanced Solder Paste Inspection System (SPI), V510i Advanced Optical Inspection (AOI) and V810i Advanced X-Ray Inspection (AXI) are specially catered for SMT assembly. Solder paste deposition is one of the crucial steps in the board assembly process and SPI is one of the most decisive procedures as it affects the finished quality of circuit boards. ViTrox's V310i SPI accurately detects defects quickly and is compatible with various types of materials, including components, PCBs and others.

Once the components are placed orderly, circuit boards will be inspected by ViTrox's V510i AOI, which provides high-speed and high accuracy inspection for quality verification. For instance, the V510i Optimus 3D AOI system uses 2D + 3D inspection concurrently to achieve high productivity and high detectability. It boasts capabilities that are unmatched by other existing solutions in the market. The system is able to detect various types of challenging defects as well.

Additionally, ViTrox's Advanced 3D In-Line X-ray Inspection System (AXI) is designed to specially cater to different sizes of PCB assemblies to be examined at the micron level with maximum throughput. This translates to increased production efficiency and cost savings for manufacturers. ViTrox's V810i AXI systems are able to inspect those hidden views of components, which helps to ensure product quality and improve production yield.

ViTrox's V-ONE combines all of the previous and future ViTrox software into one suite of solutions to connect the inspection machines in SMT production lines in order to monitor their performance on a real-time basis. V-ONE allows users to manage factories smarter and optimize factory resources across geographical locations.

In a nutshell, ViTrox provides the complete range of inspection solutions, from back-end semiconductor to PCB assembly. ViTrox aims to help customers to ensure their product quality and reduce rework costs by providing fast speed and high accuracy of inspection.