ViTrox to Showcase AI-Driven "Self-Healing" Manufacturing Ecosystem at Productronica China 2026

PENANG, MALAYSIA – March 2026 – ViTrox, which aims to be the World's Most Trusted Technology Company in providing innovative, advanced, and cost-effective automated Machine Vision Inspection Solutions for the semiconductor and electronics packaging industries, is pleased to announce its participation in **Productronica China 2026**. ViTrox will be exhibiting at **Hall E5, Booth #5600** at the **Shanghai New International Expo Centre (SNIEC)** from **25 to 27 March 2026**.

In an era of rapid digital transformation, ViTrox is offering intelligent solutions that better support customers across semiconductor advanced packaging, AI, Telecommunications, Automotive, High-performance Computing, Aerospace, etc. These innovations help manufacturers operate smarter, reduce waste, and deliver dependable outcomes through advanced technology equipment and smart manufacturing.

The Future of Autonomy: AI Self-Healing Solutions

A primary highlight of this year's showcase is ViTrox's **AI Self-Healing Solutions**. Embedded within ViTrox's inspection systems and SMT equipment, this technology integrates real-time monitoring, intelligent analytics, and automated decision-making. By enabling predictive maintenance and self-optimising workflows, the AI Self-Healing line empowers manufacturers to achieve unprecedented levels of efficiency and resilience.

Featured Advanced Inspection Solutions

Attendees will experience a comprehensive range of solutions designed for high-density boards and complex semiconductor assemblies:

- **V310i XL Smart 3D SPI:** A high-speed 3D solder paste inspection solution supporting large boards up to 460mm x 690mm. It utilises machine learning and real-time adaptive control to ensure accurate solder deposition and improved PCBA yield.

- **V510Ai DST Smart 3D AOI:** A dual-sided 3D AOI system ideal for SMT and THT assembly. It features **AI Smart Programming** for CAD-less setup and **AI Auto Buy-off**, reducing buy-off time by approximately 90% and reducing manual review effort by 60%.

- **V510Ai Vision Pro (Strip Inspection) Smart 3D AOI:** Designed for semiconductor strip inspection, it uses 4-way PSP for precise 3D defect detection. Equipped with a **25MP high-resolution primary vision system**, it detects component offsets, die defects (presence, offset, coplanarity, cracks/chipping), surface anomalies, reflective-surface defects, and foreign materials. The system also integrates **SWIR (Shortwave Infrared) inspection**, enabling detection of internal defects—such as inner cracks, missing components, delamination, and chip-off—especially in WLCSP packages that are difficult to inspect with standard vision systems. It supports board sizes up to **300 × 300 mm** for reliable strip inspection.

- **V810Ai QX1 Smart 3D AXI:** An AI-powered system delivering ultra-high-resolution imaging (up to 2µm) via Advanced Planar CT for precise dual-sided PCB inspection. It is specifically optimised for both NPI and high-volume mass production, enabling precise inspection of complex applications such as AI ASIC packages, press-fit connectors, and vertical power modules, while delivering actionable root-cause analysis of upstream SMT processes.

- **VisionXpert Smart Camera (XC-100 Series):** A compact, palm-sized all-in-one AOI solution. It integrates the lens, processor, lighting, and a 180-degree rotatable connector, making it ideal for high-speed inspection in space-constrained lines.

- **VisionXpert Smart Code Reader (XS Series):** Utilising deep learning algorithms, this reader ensures fast and reliable 1D/2D code acquisition even under challenging

conditions like laser-etched or damaged codes.

Manufacturing Intelligence Solutions Towards Industry 5.0
Complementing the hardware is the **Manufacturing Intelligence Solutions Towards Industry 5.0 (V-ONE)**. This unified ecosystem connects assets via AIoT to provide real-time analytics through a centralised Command Centre Cockpit. By integrating MES, WMS, and ERP data, V-ONE drives operational excellence and proactive anomaly detection, moving manufacturers closer to the goals of Industry 5.0.

In addition, ViTrox will showcase an **SMT simulated production line** at the booth, demonstrating automated inspection workflows and smart factory operations. The display highlights how **V-ONE** enables process analysis and optimisation through an intuitive dashboard, improves rework efficiency, supports long-term traceability, and centralises production data management.

Meet ViTrox at **Hall E5, Booth #5600** to explore the smart manufacturing and inspection solutions, experience hands-on demonstrations, and connect with our experts to discover how AI-driven technologies are shaping the future of semiconductor and electronics assembly. Schedule a meeting during the show by clicking here or scanning the QR code below.

About ViTrox Technologies
ViTrox is committed to being the World's Most Trusted Technology Company and the leading solutions provider through the most innovative, advanced, and cost-effective machine vision solution of excellent quality to its customers by integrating ViTrox's technologies, people, and strategic alliances.

ViTrox offers a full spectrum of solutions, ranging from Middle & Back-end Semiconductor Inspection Solutions, SMT PCB Assembly Vision Inspection Solutions, Integrated Industrial Embedded Solutions, and Manufacturing Intelligence Solutions Towards 5.0. ViTrox is headquartered in Penang, Malaysia, with offices in Asia, Germany, the United States, as well as sales and support sites worldwide.

For more information about ViTrox's products and services, please visit www.vitrox.com.