# Revolutionise Your SMT Quality Assurance with ViTrox's V310i SPI Solutions

## In the fast-paced manufacturing industry, the race to produce high-quality PCBs efficiently and with minimal waste is paramount

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Solder Paste Inspections (SPI) perform as a quality-driven solution in ensuring the printer achieves high quality on PCB process compliance to the standard. At ViTrox, we are industry leaders in SMT quality assurance, offering groundbreaking V310i SPI solutions with unique inspection capabilities and advanced features to eliminate the challenges associated with process requirements.


ViTrox offers numerous models under the V310i SPI Solutions designed to cater for all industries, including server/telecommunication, automotive, and more. Our V310i Solutions for SMT line can support stringent process requirements and accommodate PCB sizes spanning from 510mm x 540mm to 960mm x 690mm. Asides from our existing models (**V310i Optimus 3D**, **V310i SPI XL**, and **V310i SPI XXL**), we introduce you to the latest model in the V310i comprehensive product portfolio, the **V310i SE Series**.

## Effortless Parameter Setup and Improved Detection with A.I. Integration

V310i SPI simplifies the programming process like never before. Our Ultra Smart Programming feature empowers emerging technologies with artificial intelligence (A.I.), enabling a progression towards self-learning development and minimising human dependencies. It ensures consistent quality driven explicitly by subsets of artificial intelligence, achieving a dynamic approach to vision inspection. Gone are the days of tiresome parameter settings and lengthy learning curves. Now, achieving effortless programming takes just 5 minutes, allowing you to maximise productivity and streamline your operations.

We also understand the importance of accurate detection in the solder paste inspection process. According to researchers, the paste printing process is widely recognised as the main contributor to assembly defects, with approximately 60% of soldering defects being linked to screening process problems.[1] That is why we have integrated the advanced A.I. Missing Classification Algorithm into V310i SPI to enhance the detection capabilities of missing and insufficient solder. Experience higher accuracy and efficiency in your inspections, ensuring optimal product quality at the early stages.

## Enhanced Features for Unparalleled Precision

The V310i SPI SE series goes beyond standard inspection capabilities with its enhanced features. Our cutting-edge technology enables precise solder bump measurement and extended height measurement using shadow-free fringe pattern technology, enhancing the maximum 3D rendering capabilities from 450µm to 1500µm.

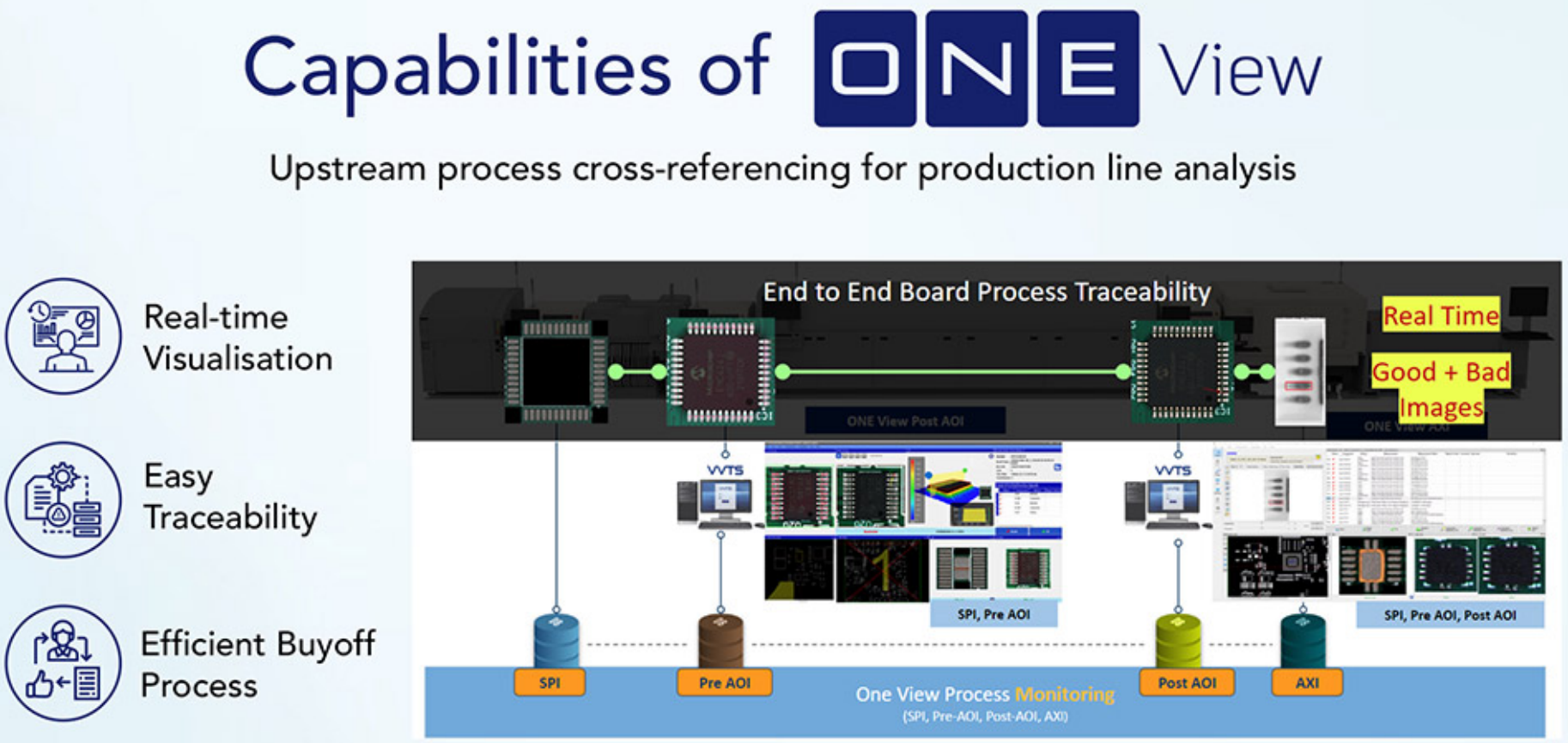
Additionally, users can now detect hairline bridges below 35µm with fine-tuning of the light source. With this level of precision, you can confidently achieve high accuracy in solder paste deposition defect detection, even in the most intricate components.

## Comprehensive Test Coverage

Experience a level of test coverage that leaves no room for defects. ViTrox's SPI solutions go above and beyond, enabling the identification of potential issues such as insufficient or excess solder paste, misalignment, bridging, or voids. With our comprehensive analysis, manufacturers can proactively detect and rectify these issues early in production, enhance quality control and minimise the risk of faulty solder joints.

## Machine-to-Machine (M2M) Connectivity for Uncompromising Quality

The V310i SPI Solutions takes quality control to the next level by facilitating communication with printers and pick-and-place partners in the market. This machine linkage feature ensures the quality of printed solder deposits, eliminating potential defects at the very beginning of the SMT process.




But that's not all. ViTrox's commitment to seamless connectivity takes your inspection processes to new heights. Our V310i SPI Solution seamlessly integrates with other machines in your production line, providing closed-loop linkage between the SPI and AOI systems. This integration allows for the transfer of SPI system files to AOI A.I. programming, streamlining your inspection processes and optimising efficiency. You'll experience real-time visualisation of inspection results from multiple front processes with our innovative **ONE View feature**, enabling easy traceability and instilling unwavering confidence in the buy-off process.

## Experience the Future of SMT Quality Assurance with ViTrox

With the V310i SPI Solution SE series, ViTrox continues to revolutionise the SMT industry. Effortless parameter setup, A.I. integration, enhanced features, comprehensive test coverage, and M2M connectivity — are just a few of the many reasons why ViTrox stands at the forefront of innovation. Another great news for you is that **ViTrox's SPI solutions are IPC-CFX-2591 validated**, therefore giving you further guarantee that we are committed to optimising your manufacturing processes. With ViTrox's holistic approach to quality assurance, you can achieve superior product reliability and customer satisfaction. Upgrade your quality assurance processes today and unlock a world of possibilities with the V310i SPI SE series. Trust ViTrox to empower your manufacturing success.

**Contact us for more exciting product information**

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