

Press Release

Viscom inspection systems in Industry 4.0 production processes

Hanover, October 2017 – Ready for Industry 4.0, Viscom AG is presenting their intelligent networking options at the world's leading trade fair, productronica 2017 (November 14 – 17, Munich). The goal is holistic optimization of the SMT line for maximum process efficiency and high process stability. To attain this goal, Viscom offers different interfaces and software tools that automatically link inspection information from the inspection systems for analysis and where necessary, exchange it with third-party systems.

The goal of the networked Viscom inspection systems is an automatic analysis of detected defects to localize and resolve their causes, so the defect rate can automatically be rigorously lowered to near zero. This affects both false calls as well as real defects; their drastic reduction pays off as optimized material costs, throughput rates and quality in the production line. In order to counter even typical startup defects on a sustained basis, Viscom offers a specific protocol for the **Closed Loop connection** between solder paste inspection (SPI) and paste printer. The real-time data exchange enables process-dependent evaluation and action control. For example, if a sustained solder paste displacement is detected by the SPI, the feedback loop to the printer automatically influences print offset correction. And with the help of the SPI inspection results, the stencil cleaning cycles can be automatically reduced to a minimum. The forward loop communication between the SPI and placement machines can accomplish a similar task. If displacement does occur, the placement position can be automatically adapted to the actual print position to ensure secure soldering.

The **Quality Uplink** from Viscom offers even more comprehensive networking of all inspection systems from the solder paste inspection (SPI) through the automatic optical inspection (AOI) and up to the X-ray inspection (AXI/MXI). The verification station, on which valuable results information and image data from the inspection systems are prepared for the operator, is also included in the network. Thanks to Quality Uplink, the inspection stages can be coordinated to achieve maximum quality. At the same time, the inspection can be variably adapted to previous results to attain even higher throughput. For example, a lead inspection in the X-ray system can be deliberately activated if the SPI has already reported a borderline defect or other anomaly.

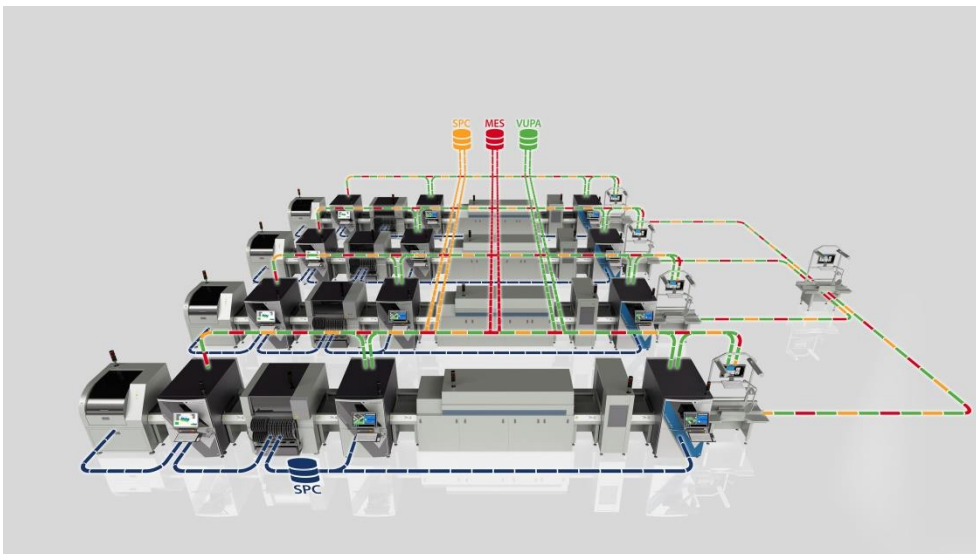
If an SPI system already in an existing production line should be extended with different inspection solutions from Viscom, **Open Interface 4.0** is offered. With it, the AOI and AXI solutions from Viscom can be connected for data exchange with the existing SPI, regardless of its manufacturer. Comprehensive use of the Quality Uplink benefits is possible via the Open Interface 4.0 interface.

In combination with the **statistical process control (vSPC)** from Viscom, all data related to the printed circuit board can be collected and analyzed for big data purposes, and be individually prepared in graphic form for the operator. The Viscom inspection systems deliver a great deal of information for each individual assembly, including the inspection results. From this data, statistical frequencies can be recorded, stability calculated and exceeded tolerance ranges determined as the process runs. Based on these data, cross references can be established along the entire production and a targeted productivity increase realized through 100% defect detection. Thanks to the big data approach, the Quality Uplink statistical processes can also be drawn upon to improve the process by determining design deficiencies or other effects on the printed circuit board. In principle, complete traceability along the process chain and process interlocking

between the machines are also possible through connection to an MES system.

Manufacturer-independent communication standards

All Viscom inspection solutions support machine-to-machine communication via the SMEMA protocol, as well as via the new Hermes Standard. Moreover, Viscom is a partner with ASYS PULSE, which collects machine data along the entire SMT line and merges it for practical applications. The operator receives a faithful linear representation for monitoring and support in accomplishing his tasks. The ASYS app can be installed on desktop workplaces, central control stations or mobile devices like an iPad, mobile phone or smartwatch.



About Viscom

Viscom AG develops, manufactures and sells high-quality inspection systems. The portfolio encompasses the complete bandwidth of optical and X-ray inspections. In the area of assembly inspection for electronics manufacturing, the company is among the leading suppliers worldwide. Viscom systems can be configured specifically to the customer and can be interlinked. The company headquarters and manufacturing location is in Hanover, Germany. With a wide network of branches, applications centers, service support points and representatives, Viscom is represented internationally. Founded in 1984, Viscom has been listed on the Frankfurt Stock Exchange (ISIN: DE0007846867) since 2006. For additional information, visit www.viscom.com.