VISCOM
vision technology

Viscom Auxiliary Modules

Systematic fault analysis
to ensure process monitoring

Programming Station

Verification Station

SPC Software
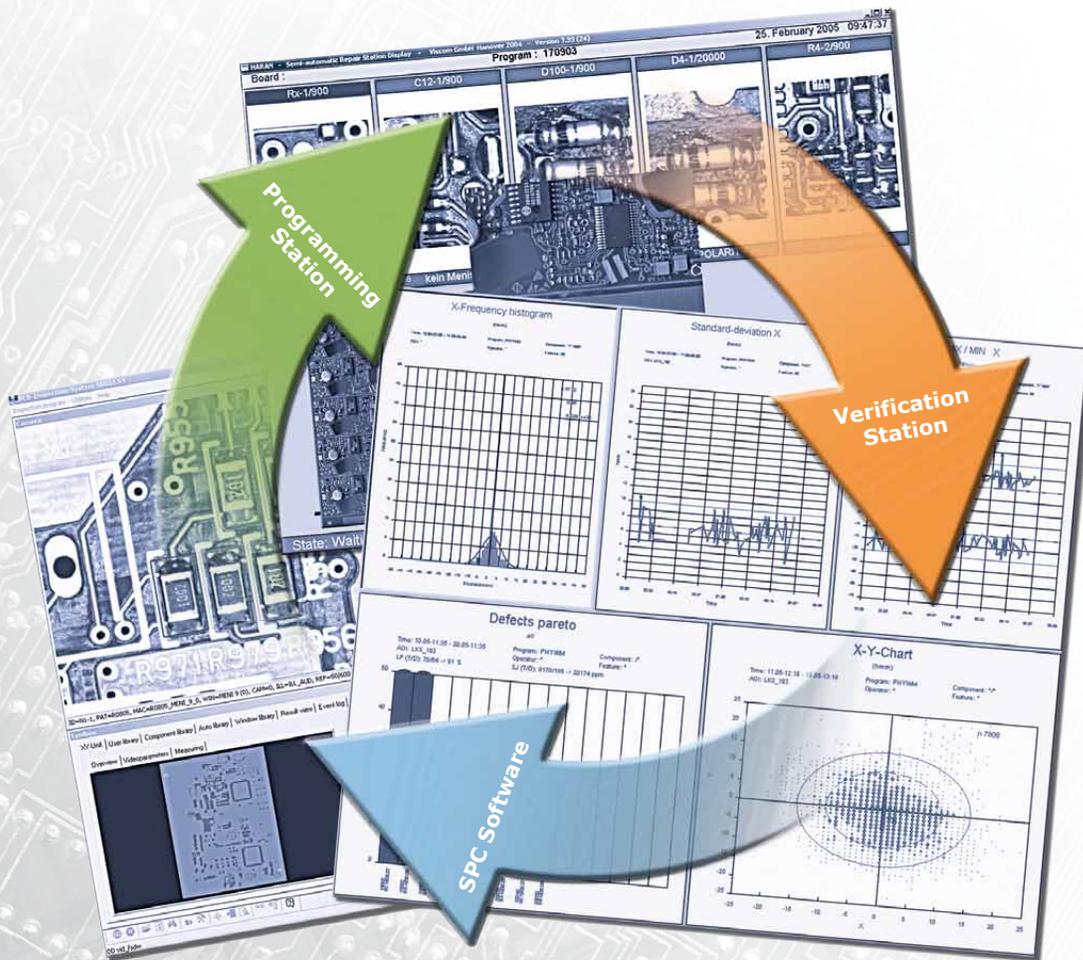
FEATURES

Verification Station S6002

Effective Fault Processing
without Halting AOI

The verification station S6002 allows defect images and features to be displayed. With it, good and bad can be separated; at the same time, it can be used to evaluate inspection data.

It connects to the inspection system (AOI/AXI) through a network. Inspection results are immediately transferred from the inspection system to the verification computer, where they can be easily and conveniently processed with the **Viscom HARAN software**.

These results are displayed on a monitor screen as image data, as well as superimposed onto an overview image of the printed circuit board with reference to specific position. The **color overview image**, displayed by the Viscom system in true-to-life photo quality, greatly eases orientation. With this image, 95 % of defects can be classified without reference to the actual board. And in the **ValidCompareMode**, a previously validated good image is offered for comparison to each defect image recognized by the AOI. This good/bad image comparison simplifies defect evaluation considerably, especially for the semi-skilled operator. The comparison image can be quickly and easily uploaded from a good PCB (Golden Board) at the AOI.

Essential inspection features can be displayed at the verification station as the program runs. After defects are classified by the operator, inspection data can be routed to an SPC server (Viscom's Statistical Process Control), which offers comprehensive **statistical evaluation of the printed circuit board inspection**. An MES interface allows data transfer to a traceability system; the resultant statistical diagrams are accessible online to facilitate rapid intervention into any variations in the production process. Documentation of classification results is also accommodated – when required, with recorded images as well.

Verification station with separate handling module
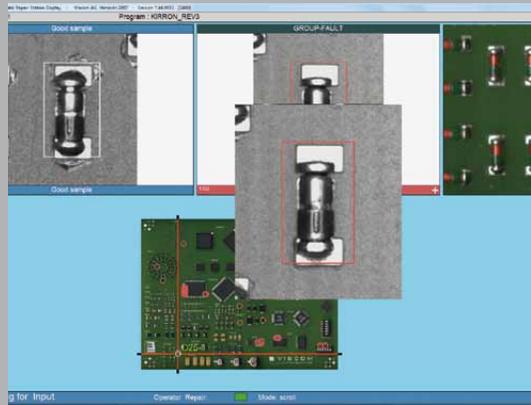
Close-up of single inspection defects
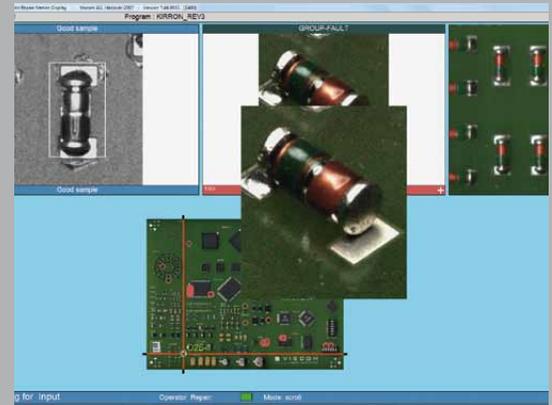
Additional color image with angled view

Several AOI/AXI systems can be linked to one verification station, or vice versa: analysis results from one AOI/AXI system can be distributed to several verification stations. Thus, this Viscom module attains the **greatest deployment flexibility while maintaining simple operability**.

A further option is **cascading inspection results** to both an inline verification station and a downstream repair station. In this configuration, inspection results are validated and defects requiring repair transferred to the repair station.

To ease defect assessment and prevent faulty classification due to human error, the system furnishes **additional reference images** taken from an angled view. This unique feature permits all defect images to be readily classified with the assistance of comprehensive image material.

Comfortable verification station

Realistic, colored overview image

Angular additional images for reliable verification

Directly linked with the SPC server

Technical Specifications – S6002

|	
Processor	Intel® Core™ i7
Main memory	4 GB
Operating system	Windows®
User interface	MFC®
Monitor	TFT
Special equipment	Detached keyboard
Interfaces	1 GB/s LAN
System dimensions	200 x 600 x 600 mm (7.9" x 23.6" x 23.6") (W x D x H)
Voltage	230 V / 50 (60) Hz, 200 Watt

SPC Software

Wide range of filter functions for statistical evaluations

The SPC software is employed where **processes have to be controlled by means of short regulating loops**. The software continuously accepts the inspection data which has been processed by the Viscom inspection systems and displays deviation tendencies in paste print, chip placement, soldering or bonding. It is thus possible to detect changes in the manufacturing process in good time.

This is presented in the form of **configurable diagrams** which can be accessed by the SPC server from different locations via the network. In addition to this, it is **possible to define the process intervention thresholds**, so that the process is interrupted if a specific defect rate is exceeded. All analyses can be output as either event-oriented or characteristic-oriented and displayed with the help of a variety of diagram types. In addition, there is a very interesting feature: the placement machine data of each defective component can also be filed when needed.

Viscom SPC software is **fully network-capable**, i.e. data may be analysed and exported by any number of machines. It is **barcode-controlled** and regulates all data required for evaluation. The SPC software permits access to specific data, such as that assigned to a certain dispenser or a particularly critical type of component. Operation is simple and the software is compatible with all Viscom AOI/AXI systems. It brings a new concept for defect definition. The advantages of these features are particularly the **avoidance of series defects and the documentation of process results**.
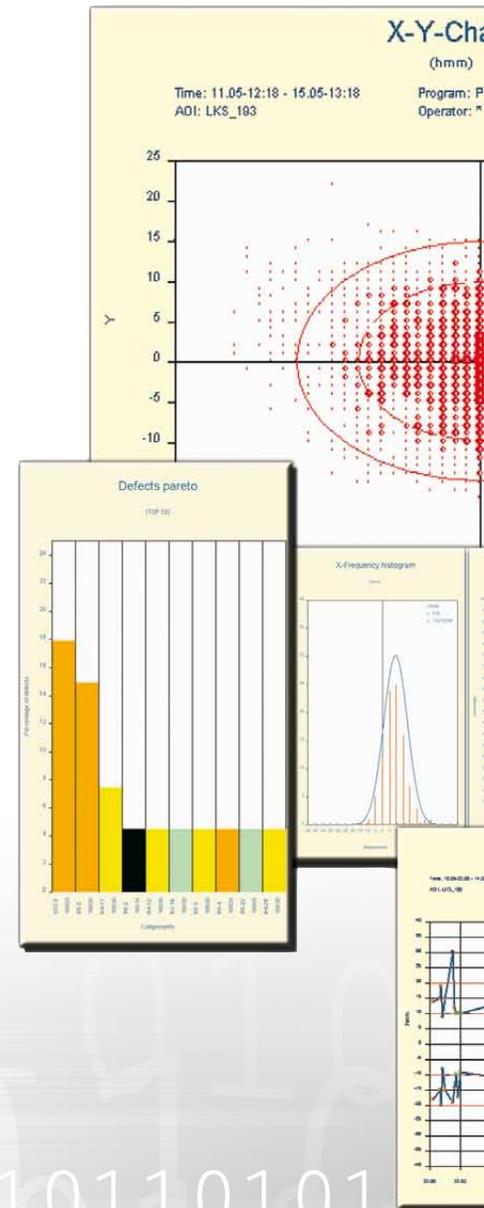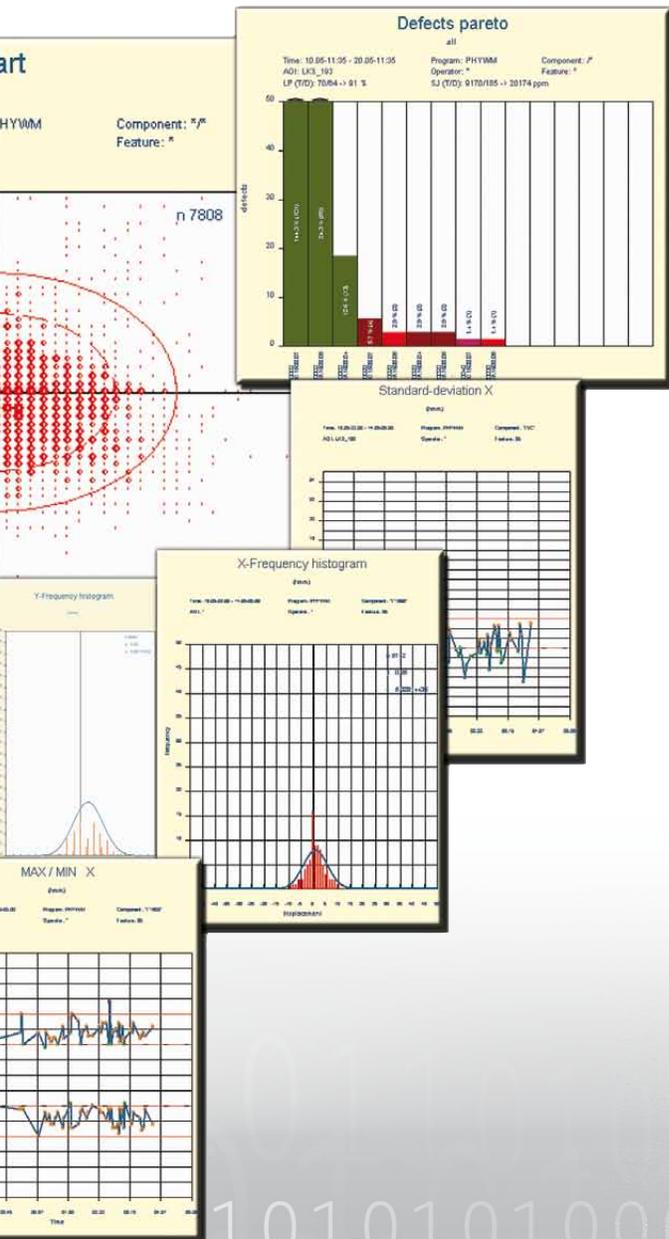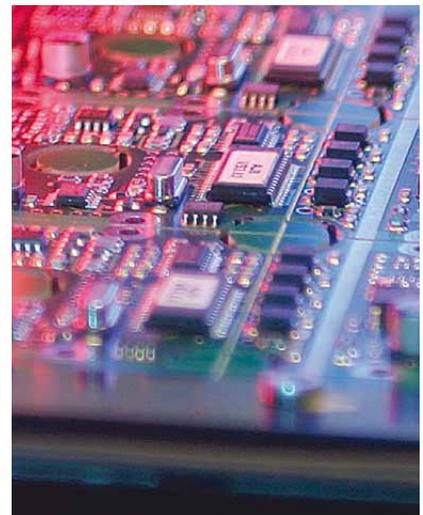
In-line trend analysis

Display of quality
improvement over a period

Documentation of
process results

Recognition of defect
groupings

Avoidance of series defects

Definition of process
intervention thresholds

Closed-Loop-Ready

Programming Station PST34

## Time-optimized creation and maintenance of inspection schedules

The off-line programming station makes it possible to **create and optimize the inspection programs** without having to use the inspection system. CAD data are verified, component types assigned and the program is created with the help of diagram.

The **user interface Viscom EasyPro** is based on a model-oriented component library and intuitive programming. The operator virtually sees the component before his eyes, to make programming easy and convenient. The essential functions of EasyPro are a user-friendly user interface, **intelligent data import** and the **IPC-compliant Viscom inspection library**, which enables **inspection plan creation in only one step**.

The user is also **guided through the „dialog"**, i.e. whenever help is required, by so-called „wizards". One wizard covers the entire program creation process. In the final step, inspection patterns are assigned from the library using the so-called „drag and drop" technique (EasyGen).

One of the central features of this software is the **integrated defect verification TrustedChange, which reduces pseudo defect incidence and verifies error escape**. It is used for checking against stored bad patterns – e. g. from the verification station and blank, soldered printed circuit boards. Whenever a program modification is carried out to reduce the incidence of pseudo defects, a check is also carried out to ensure that previously detected real defects which were validated by the verification station are still being detected. With the integrated defect **verification TrustedChange**, the quality of the inspection programs can be ensured for own production, as well as audits. It is of course **possible to co-ordinate several inspection systems from a single programming station**, as well as operate them with programs.
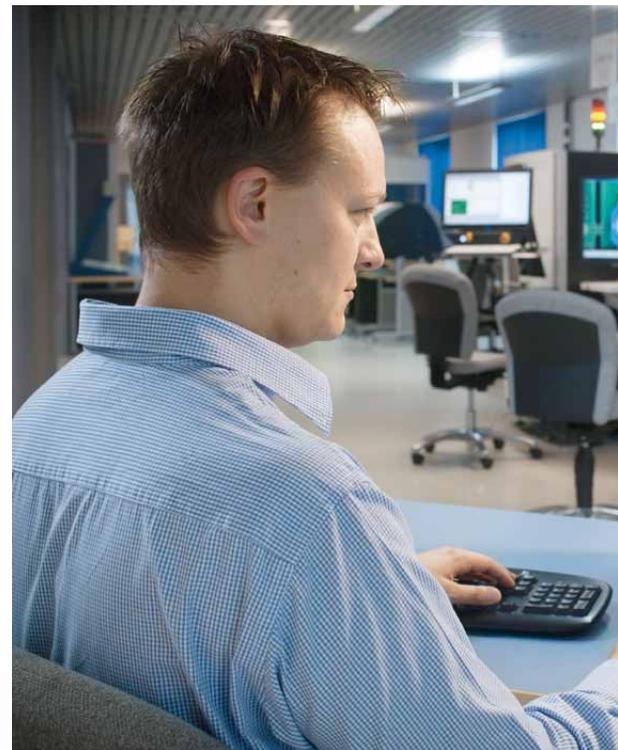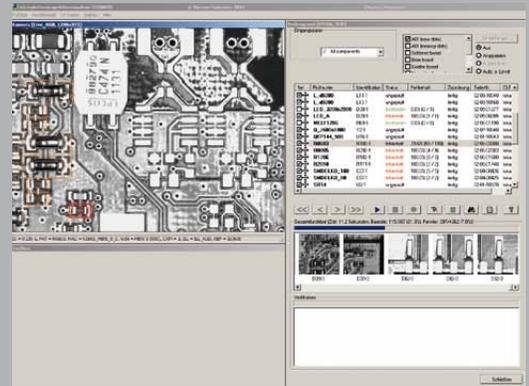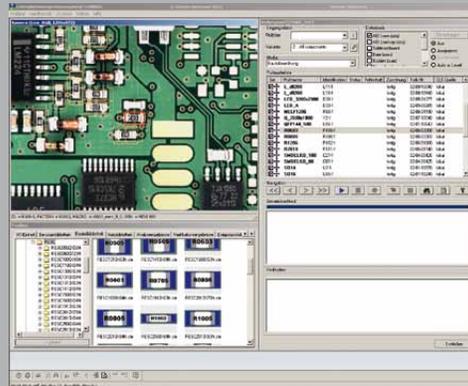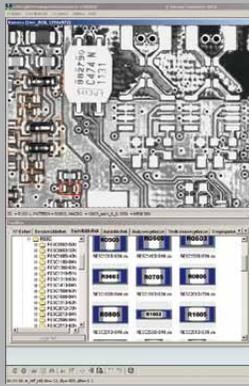
Different analysis windows using Viscom EasyPro

Comfortable user interface – Viscom EasyPro

Quick and easy program creation and maintenance

Integrated defect verification to ensure the effectiveness of zero defect strategy

IPC-compliant inspection library

Technical Specifications – PST34

Processor	Intel® Core™ i7®
Main memory	4 GB
Operating system	Windows®
User interface	MFC®
Monitor	TFT
Interfaces	1 GB/s LAN
System dimensions	200 x 600 x 600 mm (7.9" x 23.6" x 23.6") (W x D x H)
Voltage	230 V / 50 (60) Hz, 200 Watt

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representatives in Europe, USA and Asia:

www.viscom.com

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