

STRATUS III (INLINE)



FAST, RELIABLE AND ACCURATE
INSPECTION OF RIGID SUBSTRATES

Carrier
Transport



Areascan
Camera



Linescan
Camera



2D/3D
Inspection



Fully
Automated



Resolution
> 1µm



Aftermarket
Automation



AI Defect
Classification



Via
Inspection



Multiple
Lighting
Scenarios



Accelerating Quality – High-Speed Inspection for Modern Electronics Manufacturing

The STRATUS III is our versatile AOI model which offers a drawer for manual loading or conveyor-based loading to become an automated inspection and metrology solution – either offline or inline.

The various direct physical and logical integration options allow optimizing use of existing equipment and production lines with lasers, screen printers, and other process systems.

The SPIN software enables reliable inspection of challenging products such as screen-printed, plated, or multilayer substrates, ensuring high throughput, fast setup, and stable substrate handling. Using a Unique Identifier (UID), all inspection layers and process steps can be fully tracked for layer-by-layer traceability and seamless data transfer to downstream equipment. The system supports front and backside inspection for transparent materials or with a flipping station, and can inspect thick substrates up to 40 mm, including cavities or stacked die-on-die structures, in a single automatic program.

Key Features & Capabilities

- Handles carriers, trays, and rigid circuit boards
- Designed for stable inline transport and accurate positioning
- Often used for glass, ceramic and other fragile materials
- Seamlessly integrates into production lines and MES environments and full traceability



Comprehensive Defect Inspection

Using the proven STRATUS SPIN inspection software, our AOIs perform CAD-based comparison of actual and intended design data, identifying even the smallest deviations with high repeatability.

Typical defect classes include:

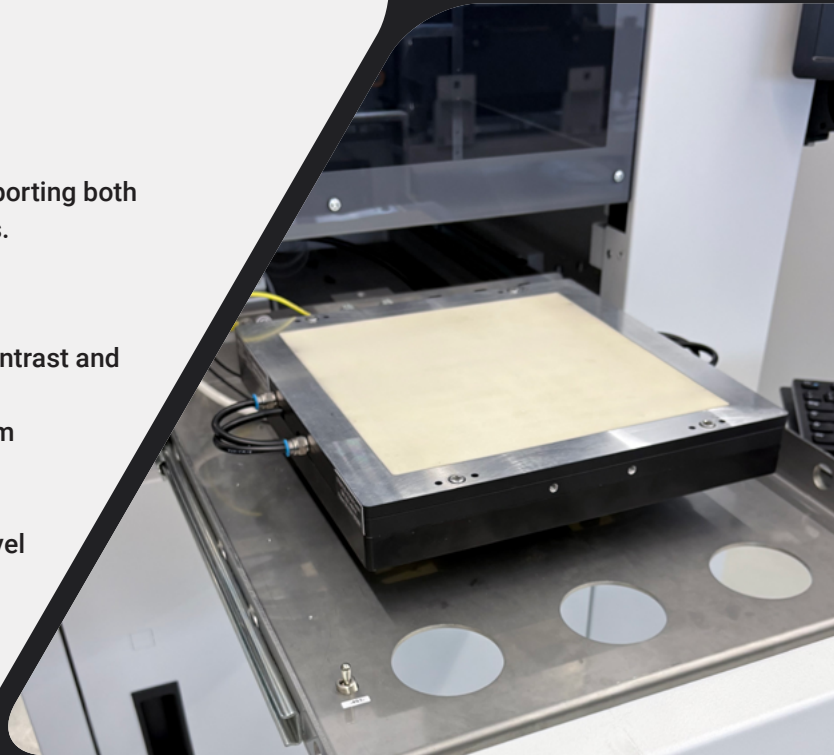
- Excess or missing paste
- Smearing, narrowing, bleeding
- Mouse bites, holes, via covering
- Irregularities and contamination
- Print shifts, substrate shrinking, screen aging

The system distinguishes random vs. serial defects, supporting both process optimization and quality tracking across batches.

Advanced Imaging & Illumination

- Various top- and backlight illumination for maximum contrast and versatility
- Optimized for fine-line screen-printed structures < 20 µm
- Resolution down to 1 µm pixel-size
- Up to 500 × 500mm substrate inspection
- For thick substrates up to 20mm and automatic multilevel inspection

Versatility at its finest paired with speed and accuracy.



Material & Process Versatility

- Conductive materials: silver, silver-palladium, silver-platinum, gold, copper
- Resistive materials: various resistor pastes
- Protective and structural layers: adhesives, cover glass, glass passivation, dielectrics

Perfect for sintered LTCC, HTCC, and multilayer ceramics, as well as advanced PCB or thin-film applications.

Connectivity & Automation

- Fully inline-capable, with SECS/GEM and MES connectivity
- Compatible with SMEMA and custom communication protocols
- Optional flipping and cleaning modules for advanced process integration
- Designed for continuous 24/7 operation with minimal operator interaction

Performance at a Glance

- Fully automated inline AOI or flexible tray loaded AOI
- For carriers and rigid substrates
- Inspection for 500 × 500mm substrates
- Resolution down to 1 µm pixel-size
- Handles thin materials in some cases <300 µm
- Various Top- & backlight illumination for maximum flexibility and optimal illumination
- Inline integration with MES & factory automation



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more
here!
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