STRATUS III INLINE WB

AUTOMATED WIREBOND & SURFACE INSPECTION – HIGH PRECISION IN MOTION

Carrier Transport

Areascsan Camera

Linescan Camera

2D/3D Inspection

Fully Automated

Resolution > 1µm

Wirebond Inspection

AI Defect Classification

High-Throughput Inline Inspection for Ceramics, PCB, LTCC & HTCC

To address challenges resulting from long setup times, high false positive rates, slow inspection cycles, and labor-intensive review of already inspected substrates the STRATUS III INLINE WB system was developed in close collaboration with industry-leading productions.

STRATUS III INLINE WB is a fully automated, conveyor-based inspection system designed for high-volume substrate production such as leadframes, ceramics, PCBs, LTCC, HTCC, and multilayer materials featuring complex multilayer wirebond structures. Combining fast setup, speed, flexibility, and cost efficiency in a compact footprint while supporting substrates up to 20" × 20" (500 × 500 mm) makes this machine a class of its own in manufacturing environments.

From CAD data to process control – all in one system.

Key Features & Capabilities

- Fully automated inline system for continuous production
- Adaptive illumination for diverse materials and finishes
- Fast inspection & setup for minimal downtime
- Compact, modular design for easy integration

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STRATUS VISION

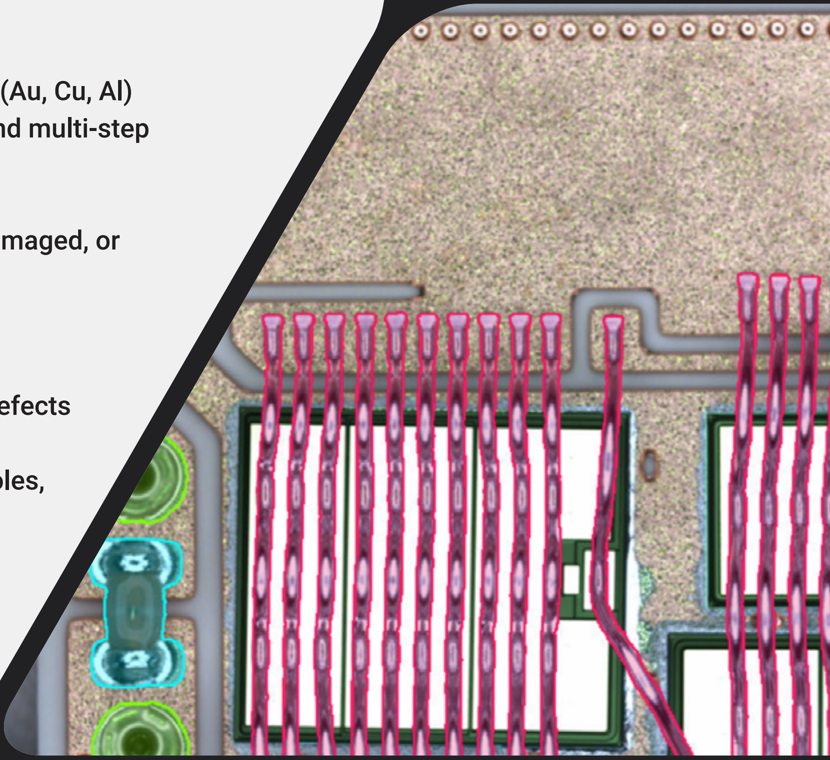
Wirebond Inspection with SPIN & SPINDLE

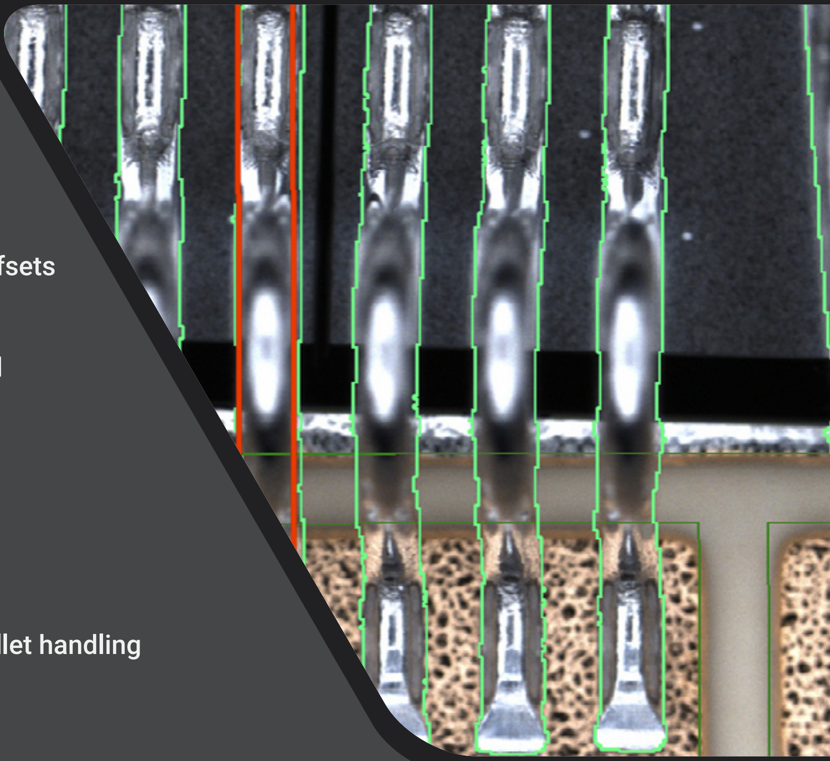
Powered by SPIN defect detection and the AI-driven SPINDLE module, the STRATUS III INLINE WB ensures precise, CAD-based inspection for complex wirebond applications.

- Minimal setup effort and time requiring only few reference parts
- Ultra-low false call rate through adaptive algorithms and AI
- Wire range: 15 µm – 600 µm
- Resolutions down to 1 µm
- Handles crossing, multilayer, and mixed-material bonds (Au, Cu, Al)
- Can inspect deep packages e.g. die on die, in housing and multi-step substrates
- Ultrasonic and wedge bonds inspection
- Detects various defects such as missing, misaligned, damaged, or connected wires

Surface Defect Detection

The SPIN software inspects simultaneously for surface defects such as:
Excess or missing materials, contamination, smearing, holes, print/ part shifts, cracks or scratches.
Optimized for difficult and reflective materials like DBC/ AMB, silver, palladium, adhesives, resistor pastes, cover glass, and electroplated gold.





High-Performance 2D & 3D Metrology

Beyond inspection, the STRATUS III INLINE WB delivers full 2D and 3D metrology for process verification and component alignment.

- 2D: bond-foot dimensions, X/Y/Theta deviation, layer offsets
- 3D (optional): warpage, BLT, loop height

Provides metrology output data for process feedback and optimization.

Connectivity & Automation

- File input: DXF, DWG, Gerber, GDSII, Oasis
- Output: TXT, CSV, custom formats
- Integration: SECS/GEM & MES ready
- Automation: flipping units, cleaning modules, carrier/pallet handling

Performance at a Glance

- Inline automation for maximum throughput
- Complete inspection: wirebond + surfaces
- AI-based software for ultra-low false calls
- Suitable for ceramics, PCB, LTCC/HTCC
- Optional 2D/3D metrology
- Factory automation ready

Learn more here! ▶▶▶

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