STRATUS OFFLINE FLEX

SEMI-AUTOMATIC OPTICAL INSPECTION MACHINE

Areascan Camera

Linescan Camera

Manual Loading

Aftermarket Automation

Multiple Lighting Scenarios

AI Defect Classification

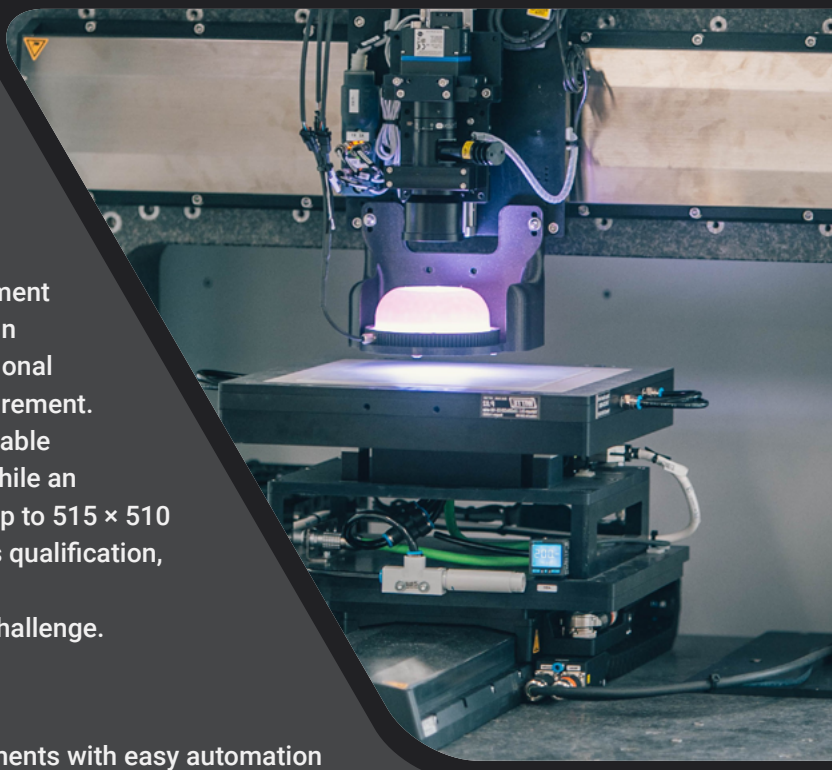
Resolution < 1µm

High Measurement Accuracy

Via Inspection

2D/3D Inspection

Wirebond Inspection



The **STRATUS OFFLINE FLEX** is a semi-automatic inspection and metrology system designed for flexible, rigid, and transparent materials such as green tapes, ceramic thin films, wafers, glass, PCBs, and AMB/DCB substrates.
Its high-precision motion system is mounted on a granite base for superior vibration isolation and thermal & movement stability. The modular design allows maximum flexibility in imaging, lighting, and sensor configuration, including optional confocal sensors for precise height and thickness measurement.
A porous-stone vacuum nest ensures flatness and repeatable precision even for ultra-thin substrates down to 10 µm, while an optional nest adapter for glass products supports sizes up to 515 × 510 mm for TGV applications. The system is ideal for process qualification, quality assurance, and R&D environments.
High precision meets flexibility – for any substrate, any challenge.

Key Features & Capabilities

- Semi-automatic operation for lab and pilot-line environments with easy automation integration
- High measurement accuracy and repeatability
- Flexible imaging and lighting setup
- Porous-stone nest for ultra-thin substrates or custom nest design
- Top- & backlight illumination for optimal material contrast
- High resolution applications

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SPIN Software Engine & SPINDLE AI

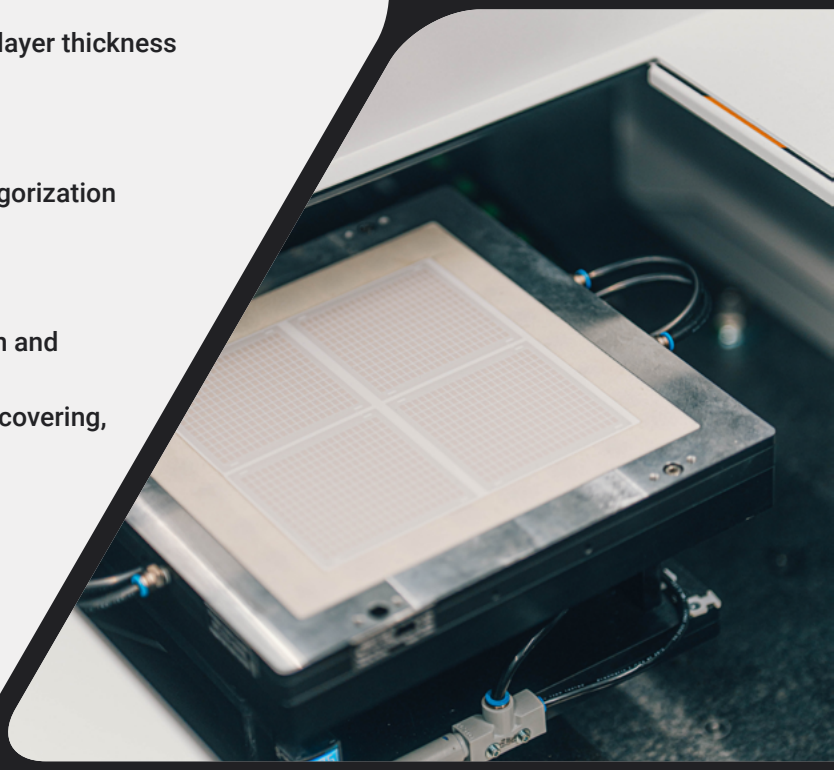
At its core, the SPIN Software Engine provides proven CAD-based inspection with advanced tooling and analytics. It is optimized for complex requirements with easy to adjust settings to capture production variance and parallel high speed inspection scenarios:

- Fast setup & CAD alignment
- Specialized inspections, e.g., laser trim, scribe-line and layer thickness
- Comprehensive reporting & data export
- User control
- Customizable camera and light control
- Optional SPINDLE AI module for automated defect categorization

Comprehensive Defect Detection

Detectable defects are any type of deviation of the design and include:
Excess or missing paste, smearing, narrowing, holes, via covering, contamination, bleeding, print shifts, shrinkage or size requirements.

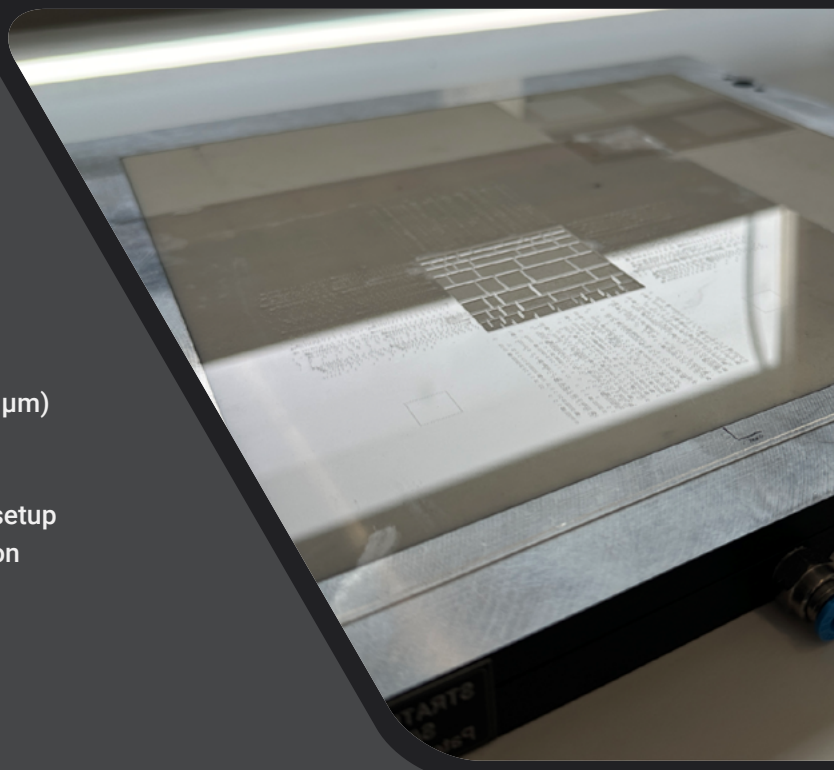
With robotic loading (optional), the system identifies random and serial defects, enabling scalable automation.



High-Performance 2D & 3D Metrology

Delivers automated, high-density metrology with hundreds of thousands of points captured in seconds during the inspection run.

- Example: 8" × 8" substrate (~500k vias) fully verified in < 1 min
- Provides 100 % metrology (not just sampling)
- Measures features down to submicron resolution (~0.2 µm)
- Ideal for precise process control in modern electronics manufacturing
- Simple metrology setup based on CAD data with quick setup
- Repeatable measurements over the entire batch variation
- Easy results export and data management



Performance at a Glance

- Semi-automatic precision inspection
- 10" × 10" inspection in < 30 s
- Reliable defect detection on fine-line structures < 10µm
- 100 % metrology capability
- CAD-based analysis with AI option
- Ideal for R&D and production QA

Learn more here! ▶▶▶

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