

Desktop Inspection



4Sight's new product brings the reliability and power of an industry leading and fully automated in-line inspection system to the desktop. 48bit colour imaging coupled with proven and novel image interpretation software, running on a high performance Microsoft® Windows XP Professional® platform results in an easy to use system with unprecedented inspection capability and performance.

Product for inspection is placed on an adjustable fixture located on a manually operated sliding table at the base of the imaging unit.

Optimised for process troubleshooting, the unit is designed to be easily re-positioned within production environments. The system is easily and quickly set-up allowing manufacturing issues to be investigated in a timely and efficient manner.

Intended for the inspection of component parts, partially built and complete assemblies, the system can be used for:

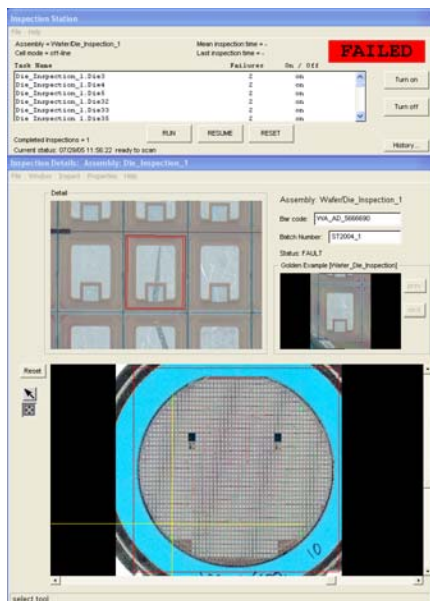
- Process verification and debug
- 1st article verification
- Inspection during small batch production, new product introduction and prototype runs
- Sample inspection of high volume production



Software

The software platform is licensed from the CyberOptics Corporation and forms an integral part of their Flex® AOI system, an established leader in the PCB inspection market. Its key features include:

- A novel feature recognition and location methodology, SAM® (Statistical Appearance Modelling) that learns the legitimate variation in appearance of features of interest.



Die Inspection

- An easy to use programming user interface, allows sophisticated inspection tasks to be constructed easily and quickly. CAD import facilities and interactive set-up tools available
- Intuitive operator level and defect review/classification user interfaces
- Password access for programmer, operator & reviewer user levels

Applications

- Feature detection and measurement of orientation and position
- Surface inspection
- Defective feature identification
- Variant and type recognition

Imaging

User programmable imaging:

- High resolution image acquisition for fine detail inspection
- Lower resolution for rapid feature detection and location
- Grey level mode for highest speed image acquisition

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System Specifications

Max inspection area	215x355mm
Min pixel size	5.3 μ
Max pixel size	508.0 μ
Typical inspection speed:	
Colour	1200 features per second
Grey scale	3600 features per second
Top side clearance	100mm (max)
Bottom side clearance	100mm (max)
Computer	Microsoft XP Professional® Dual Processor AMD® Dual Core 1.8 GHz/2Gb Ram/80Gb HDD
Monitor	17 inch LCD Flat Screen (1280 x 1024)
Power requirements	Single Phase 220 – 240 VAC 3 Amps (max)
Dimensions - imaging unit (mm)	660(L) 430(W) 500(H)
Weight (imaging unit)	Approx 45 Kg

Measurement Capability

Measurement performance within ± 2 mm of the plane of focus	X (μ)	Y (μ)	Θ°
Repeatability (max) <i>(Root mean square of SD's of repeated measurements of a population of features)</i>	10.0	10.0	0.1
Accuracy (max) <i>(SD of average of offsets from known co-ordinates of a population of features on a chrome on glass test piece)</i>	25.0	25.0	0.1
Offset (max) <i>(Average offset from known co-ordinates of features on a chrome and glass test piece)</i>	± 1.0	1.0	± 0.1

Options

- Results analysis and SPC reporting data-base
- Bar-code reader – results automatically tagged and recorded against bar-code
- Applications advice and guidance

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All specifications are subject to change without notice

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