

AOI solutions you can count on.



FX-940 ULTRA 3D AOI

In-line PCB inspection

Nordson Test & Inspection's advanced 3D imaging technology offers high-speed PCB inspection with exceptional defect coverage. With one top down viewing camera, four side viewing cameras and 2D + 3D inspection, the FX-940 ULTRA inspects solder joints and verifies correct part assembly enabling users to improve quality and increase throughput.

Programming the FX-940 ULTRA is fast and intuitive. Operators typically take less than 30 minutes to create a complete inspection program including solder and lead inspections. The FX-940 ULTRA utilizes a standard package library to simplify training and ensure program portability across manufacturing lines. Advanced LED lighting and newly available image processing technology integrates several techniques, including 3D metrology, color inspection, normalized correlation and rule-based algorithms, to provide complete inspection coverage with an unmatched low false failure rate.

Configurable for all line positions, the FX-940 ULTRA is equally effective for paste, pre / post-reflow and final assembly inspection. Off-line programming maximizes machine utilization and real-time SPC monitoring provides a valuable yield enhancement solution.

www.nordson.com/TestInspect

**Nordson**
TEST & INSPECTION

Features

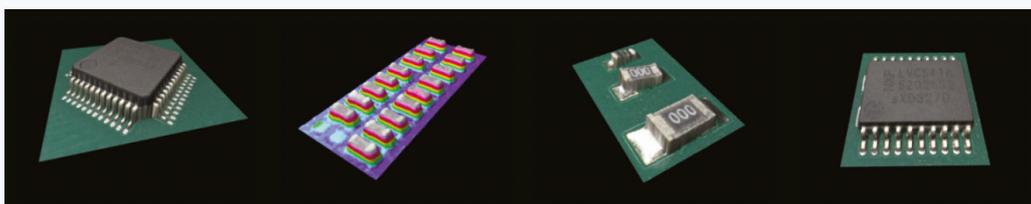
- 5 axis 3D NYTVISION Technology
- Advanced 2D + 3D inspection
- Multi-fringe digital projection
- 1 top-down and 4 side viewing cameras
- Automatic Z Focus
- Automatic programming tools: < 30 minutes
- SPI Module
- High defect coverage / low false failure
- SPC data collection & reporting
- Optional Ultra high-resolution 3D sensor

Automated 3D Inspection for

- Co-planarity of chips, BGAs and other height sensitive devices
- Solder defects / paste
- Lead defects / lifted leads
- Component presence and position
- Correct part / polarity
- Through-hole parts

Specifications

Inspection Capabilities	
FX-940 ULTRA 3D	Multi-function system with top-down viewing, 4 side viewing cameras 2D + 3D Inspections
Throughput	130 cm ² /sec (2D) – 60 cm ² /sec (3D)
Maximum Board Size	27.5" x 22" / 698mm (x) x 559mm (y)
Maximum Inspection Area	22.5" x 18.5" / 571mm (x) x 470mm (y)
Clearance	50mm top / 100mm bottom
Minimum Component Size	008004 with high magnification sensor option
False Calls	<500 PPM (<0.05% typical)
Defects Detected	Part: shifted, missing, wrong, polarity, skew tombstone, HiP, tilt, flip, billboard Lead: bent, lifted, bridging Solder: open, insufficient, short, solder balls Other: FOD, SPI
Software	
Algorithms	3D body (x,y,z, theta, tilt), 3D solder profile, part, height, part coplanarity, 3D lead inspection, color, OCR, OCV barcode (1D & 2D), histogram, blob analysis, edge detection
Data Requirements	ASCII Text, X-Y position, part #, ref. #, polarity
CAD Translation Package	Aegis, Unicam, Fabmaster, YESTECH CAD Utility
Off-line Software	Optional - Rework, Review and Program Creation
SPC Software	Optional - Real-time local and remote monitoring of first pass yield, defect trends and machine utilization
Data Outputs	Text, SQL, ODBC, MS Access
Hardware	
Material Handling	SMEMA, dual direction auto width conveyor, pass / fail signals, board clamping
Lighting	Multi-axis 4 phase LED
Imager	Dual lane conveyor, heavy duty chain conveyor, large board option up to 1.5m
Facilities	
Power	110-220VAC, 50/60 Hz, 15 amps
Air input	60 PSI min., 1/4" air hose, 2 CFM
Footprint	39" x 52" x 60" (1000mm x 1329mm x 1531mm)
Weight	950 lbs (430 kg)



For more information, speak with your Nordson representative or contact your Nordson regional office

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