

AOI solutions you
can count on.

The Ultimate in
3D inspection!



FX-940 ULTRA 3D AOI

In-line PCB inspection

Nordson YESTECH'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 inspection, 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.

Features:

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

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

FX-940 ULTRA 3D AOI In-line PCB inspection

Specifications

Model

FX-940 ULTRA 3D

Multi-function system with top-down viewing,
4 side viewing cameras
2D + 3D Inspections

Specifications

Throughput: Up to 25 sq. in./sec. > 1.5 million components per hour
Maximum Inspection Area: 16" x 19" (406mm x 480mm)
Clearance: 2" (50mm) top and bottom
Minimum Component Size: 01005 with high magnification option
False Calls: <500 PPM (<0.05% typical)
Defects Detected: Part: position, missing, wrong, polarity, skew, tombstone
Lead: bent, lifted, bridging
Solder: open, insufficient, short, solder balls

Software

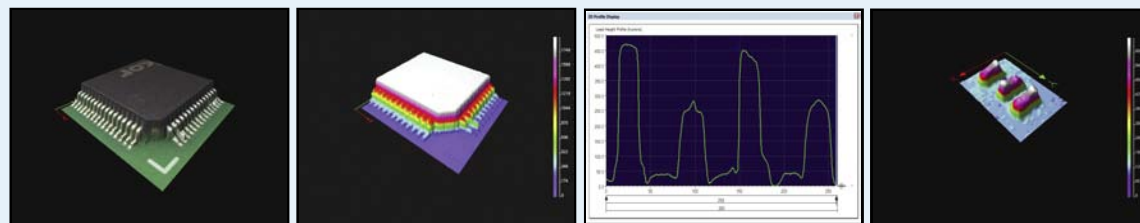
Algorithms: Height measurements, color, OCV, OCR, barcode recognition, both image and rule-based algorithms.
Data Requirements: ASCII Text, X-Y position, part #, ref. #, polarity
CAD Translation Package: Aegis, Unicam, Fabmaster, YESTECH CAD Utility
Off-line Software: Optional - Rework, Review and Program 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: Multiangle LED
Conveyor: Dual lane conveyor, heavy duty chain conveyor, 3 stage and large board option

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)



3D image of lifted lead.

Color map of lifted lead.

Lead height profile.

Lifted components.

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