


# FX-940 AOI

In-line PCB inspection

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

Programming the FX-940 is fast and intuitive. Operators typically take less than 30 minutes to create a complete inspection program including solder inspection. The FX-940 utilizes a standard package library to simplify training and ensure program portability across manufacturing lines.

Advanced Fusion 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 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:**

- Proprietary megapixel color imaging
- Capture on the fly technology
- 1 top-down and 4 side angle cameras
- Quick set-up
- High speed
- High defect coverage / low false failure
- Optional 3D inspection

**Automated Inspection for:**

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

Nordson YESTECH

# FX-940 AOI In-line PCB inspection

## Specifications

### Model

**FX-940** — Multi-function system with top-down viewing, Capture on the fly technology

Optional Upgrades: 4 side angle cameras; Digital Fringe Projection 3D Inspection

### Specifications

| | |
|---|---|
| Throughput: | Up to 30 sq. in./sec. > 1.5 million components per hour |
| Maximum Board Size: | 20" x 21" (500mm x 525mm) |
| Clearance: | 2" (50mm) top and bottom |
| Minimum Component Size: | 0201; 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: | Color, OCV, OCR, barcode recognition, both image and rule-based algorithms. Optional 3D |
| Data Requirements: | ASCII Text, X-Y position, part #, ref. #, polarity |
| CAD Translation Package: | Aegis, Unicam, Fabmaster, YESTECH CAD Utility |
| Programming Skill Level: | Technician or operator |
| Operating System: | Windows 7 |
| 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: | Proprietary Fusion Lighting™ multiangle LED |
| Imager: | Up to 18 megapixel color camera sensor<br>25, 12 or 8 micron pixel size |

### Options

| | |
|---|---|
| Conveyor: | Dual lane conveyor, heavy duty chain conveyor and 3 stage |
| Large Board Option | Optional 48" x 21" (1219mm x 510mm) |
| Bottom Side Camera: | Optional for bottom side bar codes |
| Board Supports: | Bottom side |

### 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) |
| Machine Installation: | < 1 hour |


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