

AOI & X-Ray solutions
you can count on.



M1 Series AOI

M-size in-line automated inspection

Nordson YESTECH's advanced megapixel technology offers high-speed PCB inspection with exceptional defect coverage. With high resolution and telecentric optics, M1 Series inspects solder joints and verifies correct part assembly, all within a footprint less than 1 meter wide, enabling users to improve quality and increase throughput.

Programming the M1 Series is fast and intuitive. Operators typically take less than 30 minutes to create a complete inspection program including solder inspection. The M1 Series utilizes a standard package library to simplify training and insure program portability across manufacturing lines.

Newly available image processing technology integrates several techniques, including color, normalized correlation and rule-based algorithms, to provide complete inspection coverage with an extremely low false failure rate.

Configurable for all line positions, the M1 Series is equally effective for paste, pre / post-reflow or final assembly inspection. Off-line programming maximizes machine utilization and real-time SPC monitoring provides a valuable yield enhancement solution.

Features:

- Quick set-up
- High defect coverage
- High speed
- Low false failure rate
- Smaller footprint
- Best price performance

Automated Inspection for:

- Solder defects
- Lead defects
- Component presence and position
- Correct part / polarity
- Through-hole parts
- Paste

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Specifications

Model

M1 Multi-function system with top-down viewing,
3 megapixel camera

Inspection Capabilities

Throughput: > 3550 sq. mm second (> 5.5 sq. in / second)
Maximum Board Size: 350mm x 250mm (14 x 10 in.)
Minimum Board Size: 50mm x 50mm (2 x 2 in.)
Topside Clearance: 25mm (1 in.)
Bottomside Clearance: 50mm (2 in.)
Minimum Component Size: 01005
Defects Detected:
Part: position, missing, wrong, polarity, skew
tombstone, etc.
Lead: bent, lifted, bridging
Solder: open, insufficient, short, solder balls

Software

Algorithms: 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
Programming Skill Level: Technician or operator
Operating System: Windows XP Professional
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.

Hardware

Material Handling: SMEMA, dual direction auto width conveyor,
pass / fail signals, board clamping
Conveyor Length: 876mm (34.5 in.)
Conveyor Height: 950mm + /- 35mm (37.5 + /- 1.3 in.)
Lighting: Proprietary Fusion Lighting™ multiangle LED
Imager: 3 megapixel color camera
Resolution 2048 x 1536; 20 or 12.5 micron pixel size
Optics: Telecentric lens (eliminates distortion for more accurate
and repeatable measurement and inspection results)
Warpage Compensation: Optional
Bottomside Barcode Reader: Optional

Facilities

Power: 100-240 VAC, 50/60 Hz, 10 amps
Air input: 60 to 90 PSI (0.4 to 0.6 Mpa), 2 CFM
Footprint: 876mm x 1010mm x 1400mm (34.5 x 40 x 55 in.)
Weight: 770 kg (1700 lbs)
Machine Installation: < 1 hour

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