

YTV M1 AOI

Automated PCB Inspection

- Quick Set-up
- High Defect Coverage
- High Speed
- Low False Failure Rate
- Smaller Footprint
- Best Price Performance

YESTech's advanced Thin Camera™ technology offers high-speed PCB inspection with exceptional defect coverage. With three megapixel 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.



Automated Inspection for:

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

Y T V M 1 A O I S p e c i f i c a t i o n s

Models

YTV-M1 Multi-function system with top-down viewing camera and telecentric lens

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:	Component: position, missing, wrong, polarity, skew, tombstone, etc. Lead: bent, lifted, bridging Solder: open, insufficient, short, solder balls

Software

Algorithms:	Normalized correlation, color, OCV, OCR, barcode recognition and rule-based
Data Requirements:	Gerber Data, ASCII Text, Most Native CAD Formats
CAD Translation Package:	CircuitCAM, Unicam, YESTech CAD Utility
Programming Skill Level:	Technician or operator
Operating System:	Windows XP Professional
Languages:	English, Spanish, Chinese
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:	USB 2, SMEMA, dual direction auto width conveyor with integrated, full length, board clamping
Conveyor Length:	876mm (34.5 in.)
Conveyor Height:	950mm +/- 35mm (37.5 +/- 1.3 in.)
Lighting:	Proprietary Fusion Lighting™
Imager:	YESTech 3 Mega-pixel Thin Camera™ (G2) 2048 x 1536 Resolution with 20 or 12.5 micron pixel size
Optics:	Telecentric lens (eliminates distortion for more accurate and repeatable measurement and inspection results)
Board 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)
Footprint:	876mm x 1010mm x 1400mm (34.5 x 40 x 55 in.)
Weight:	770 kg (1700 lbs)
Machine Installation:	< 1 hour

