

# YTV M1 Series AOI

## Automated PCB Inspection

- **Quick Set-up**
- **High Speed**
- **High Defect Coverage**
- **Low False Failure Rate**
- **Smaller Footprint**



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**

**YESTech**

*“World Leader in Automated Optical Inspections and X-Ray Inspection Systems”*

## SPECIFICATIONS\*

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	40mm (1.5 in.)
▶ Bottomside Clearance	40mm (1.5 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

\* Specifications subject to change



Vietnam's leading supplier of semiconductor interconnect assembly equipment.

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