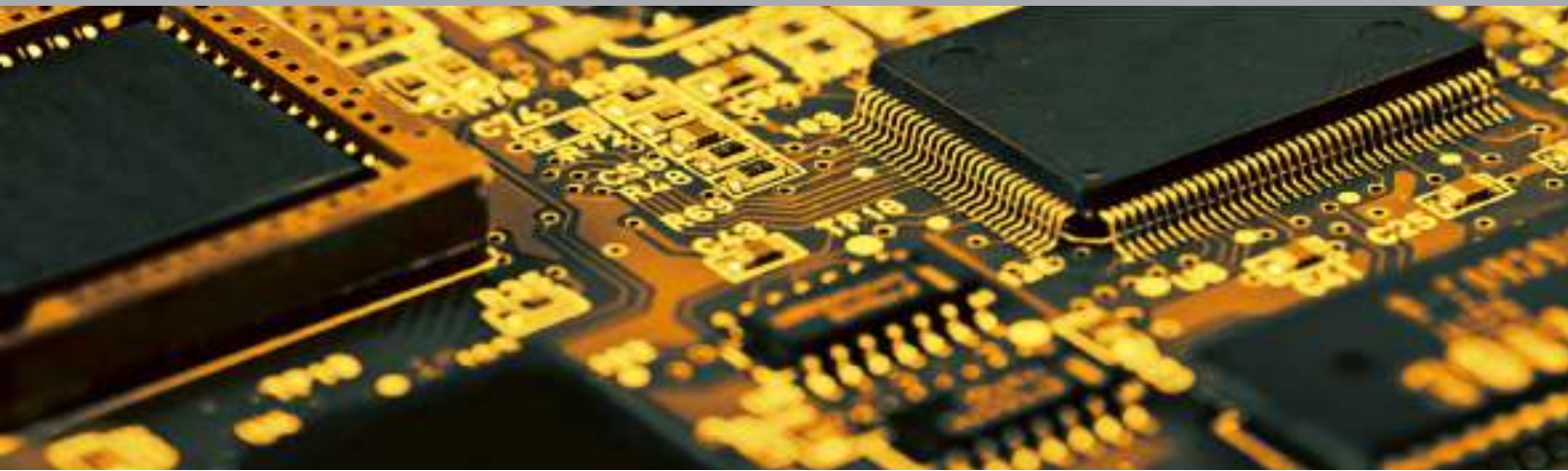# MIRTEC

3D AOI Series
MV-3 OMNI

- 15 Megapixel Top Camera
- 12 Projection Moiré Technology
- 8 Phase Coaxial Color Light
- 18 Megapixel Angled Camera

3D AOI Series
MV-3 OMNI

MV-3 OMNI is a Full-3D benchtop vision insepctor with 15 Megapixel high resolution camera, Digital Moiré 12 Projection, 18 Megapixel angled camera and 8 phase coaxial color lighting system to allow inspection upto 03015(mm) chip.

Design for Space Utilization

MV-3 OMNI is an benchtop machine that is free from line configuration, making it is easy to arrange the machine and handle material easily. It is a universal system that demonstrates excellent ability even in small quantity production of various kinds without being influenced by the narrowness of manufacturing facilities and frequent inspection material alteration.
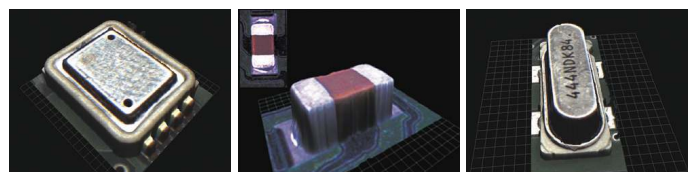

Digital 12 Projection Moiré Technology

Moiré Projection Unit measures a component in EWSN 4 directions to obtain 3D image for failsafe and high-speed defect detection.

- Obtain 3D image without blind spots using 4(four) 3D projections
- Various component height inspection with the combination of high, medium and low frequency moiré pattern
- Linkage with the main camera to apply Full 3D inspection to detect various defects flawlessly

Frequency	1. Projector	2. Projector	3. Projector	4. Projector
High				
Medium				
Low				

High Resolution 15 Megapixel Camera

We are proud to have applied the next generation vision system with the 15 Megapixel high resolution camera for more precise and stable inspection and high speed CoaXPress transmission method to allow 4 times more data transmission and 40% increased process speed.
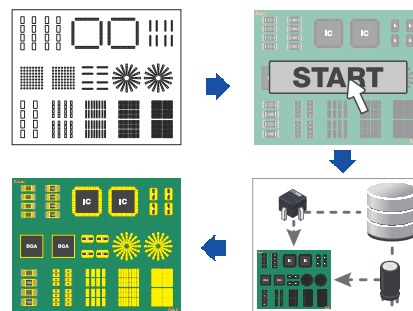
- 15 Megapixel Camera Loaded
- CoaXPress high performance vision system applied
- Large FOV to increase inspection speed
- Processing speed increased by 40% compared to Camera Link

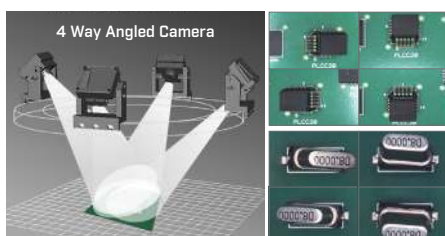## Deep Learning applied Auto Teaching Tool

Inspection software which is applied Deep Learning solution search the most suitable component information and teach the component automatically. User would have the best inspection quality always regardless of user's skill as all of process will be done by a few clicks.

- Reduce teaching time more over 90% than manual teaching
- Secure the best inspection quality always by inspection quality and working process standardization
- Accurate component searching and matching by applying Deep Learning solution
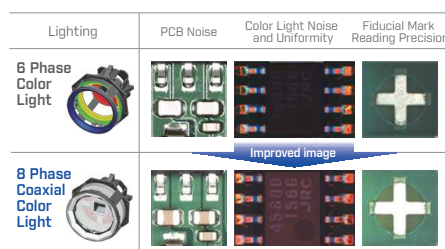
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18 Megapixel Angled Camera

· 4 cameras in EWSN applied
· The only solution for J-lead, QFN and Coil Solder inspection
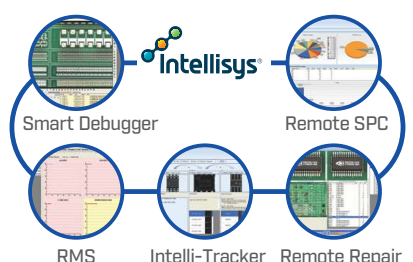· Full-PCB inspection with side cameras

4 Way Angled Camera

8 Phase Coaxial Color Light

· Color change extraction following angle of reflection
· Ideal for Chip / IC lift, micro crack and solder inspection
· Precise solder joint inspection

Lighting	PCB Noise	Color Light Noise and Uniformity	Fiducial Mark Reading Precision
6 Phase Color Light			
		Improved image	
8 Phase Coaxial Color Light			

Possible to recognize in advance when a defect occurs in the line and support to reduce cost due to defects by remote controlling.

Intellisys

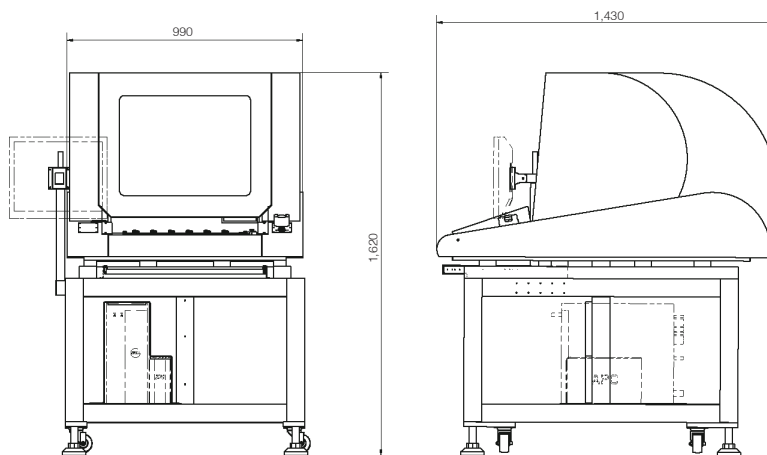Smart Defect · Remote SPC
RMS · Intelli-Tracker · Remote Repair

Specifications

Model	MV-3 OMNI	
PCB Size Range		
Benchtop AOI	50 x 50 ~ 450 x 400 mm	50 x 50 ~ 660 x 510 mm
OMNI-VISION® 3D / 2D Inspection Technology		
3D Inspection Technology	Digital 12 Projection Moiré Technology	
Height Accuracy	±3 μm	
3D / 2D Maximum Inspection Speed		
15 Megapixel Camera — CoaXPress — 10 μm	1,890 mm² / Sec	
15 Megapixel Camera — CoaXPress — 15 μm	4,260 mm² / Sec	
2D Maximum Inspection Speed		
15 Megapixel Camera — CoaXPress — 10 μm	5,080 mm² / Sec	
15 Megapixel Camera — CoaXPress — 15 μm	10,716 mm² / Sec	
System Specification		
Lighting System	8 Phase Coaxial Color Lighting System	
Side Camera System — Option	18/10 Megapixel Digital Color Side Camera (4ea)	
Software — Standard	Built-in SPC, Built-in Repair	
Software — Option	RMS, RRS, IRS, OLTT, RDS, Remote SPC, ePM-AOI	
PCB Top Side Clearance	45 mm	
PCB Bottom Side Clearance	50 mm	
PCB Thickness	0.5 mm - 3 mm	
Maximum PCB Weight	3 kg	
Minimum Measurement Size — 10 μm	03015 Chip (mm) / 0.3 Pitch (mm)	
Minimum Measurement Size — 15 μm	0603 Chip (mm) / 0201 Chip (Zoll) / 0.4 Pitch (mm)	
Robot Positioning System — X/Y Axis	Servo Motor System	
Power Requirements	Single Phase(s) 200~240V 50~60Hz, 1.1 kW	
Dimension and Weight		
Dimension	990(W) x 1,430(D) x 1,620(H) mm	1,200(W) x 1,650(D) x 1,620(H) mm
Weight	Approx. 550 kg	Approx. 750 kg

※ We will not be responsible for any problems caused by using unverified BARCODE READER. Contact our HQ for the list of allowed BARCODE READER models to use.

Dimension

(Unit : mm)

• Data subject to change without notice.

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