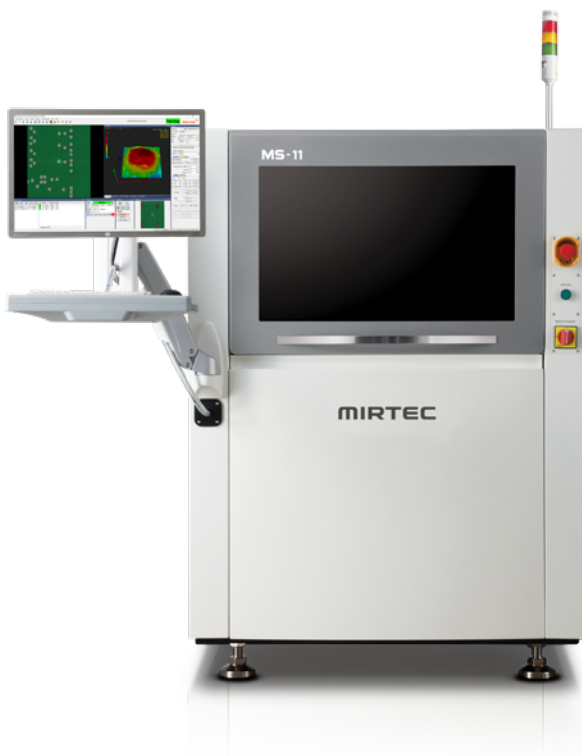
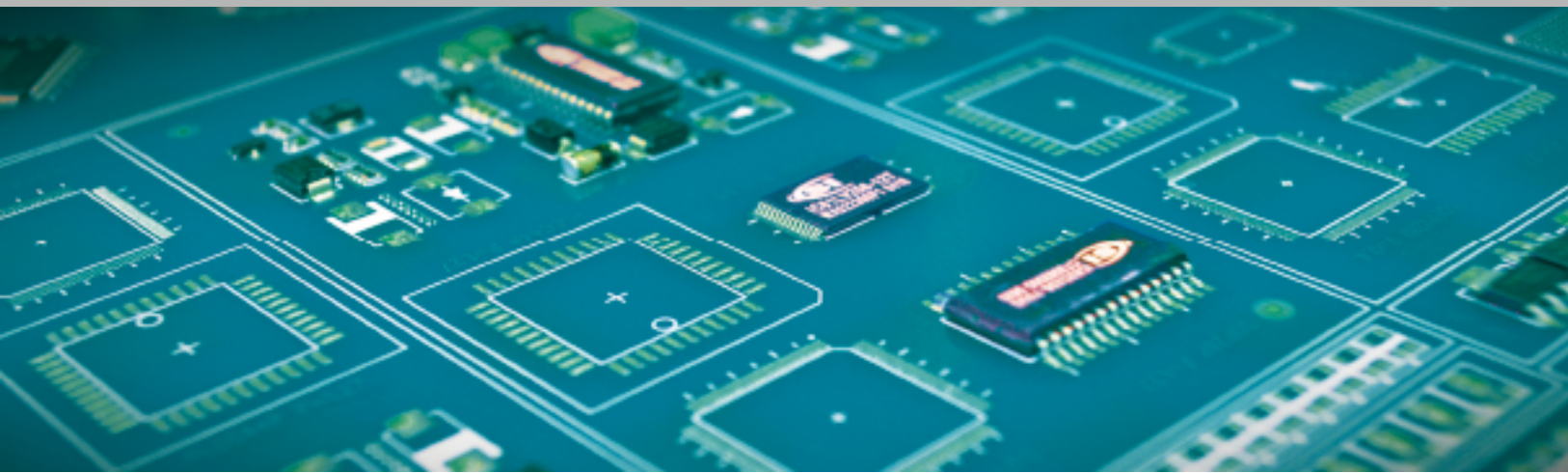


3D SPI Series

MS-11



- Dual-Projection
- 25 / 15 / 4 Megapixel Camera
- CoaXPress
- Warpage-free
- Intellisys® System

3D SPI Series

MS-11

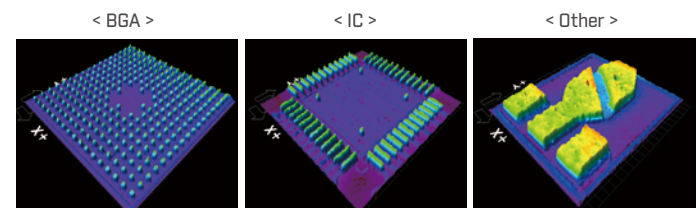
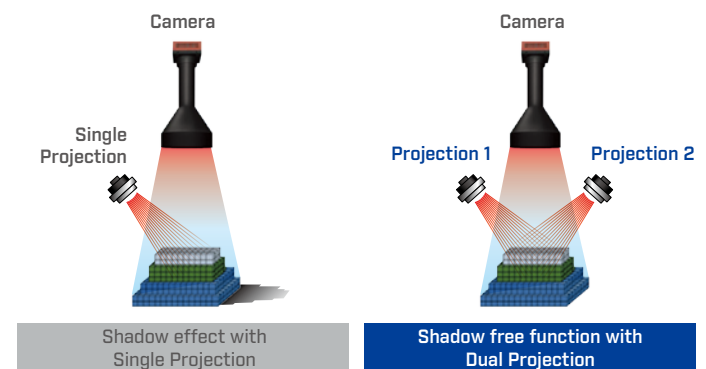
MS-11 Series is a inline 3D SPI machine which inspects the solder amount status after the solder is spread to clearly grasp the process. With a 25 Megapixel camera contributing to productivity enhancements, 0201 (mm) size solder paste inspection is possible.



Dual Projection Probe

To reduce the error caused by the shadows when imaging high components with single projection, the Dual projection probe is applied. With precise and accurate 3D measurement when imaging high components distorted measurements possiblility due to shadowing effects are completely eliminated.

- Dual Projection to completely solve defused refelection shadowing problem
- A combination of images from opposite direction for a complete volume measurement
- Perfect and precise 3D measurement capability





The World's First High Resolution 25 Megapixel Camera

We are proud to have applied the next generation vision system with 25 Megapixel high resolution camera for more precise and stable inspection and the world's only high speed CoaXPRESS transmission method to allow 4 times more data transmission and 40% increased process speed.

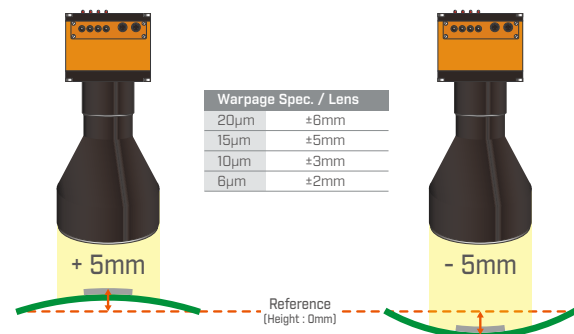
- The world's only 25 Megapixel camera loaded
- CoaXPRESS High performance vision system applied
- Large FOV to increase inspection speed
- Processing speed increased by 40% compared to Camera Link



Warpage-free Inspection System

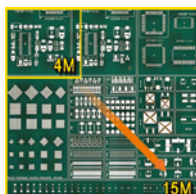
SPI machine detects the warpage of PCB within FOV while it captures board image, and automatically compensate it, so that bent PCBs can be inspected without any problem.

- Bent PCB inspection without Z-Axis movement
- Inspection capability from $\pm 2\text{mm}$ to $\pm 5\text{mm}$ (depending on Lens)
- More accurate 3D results guaranteed



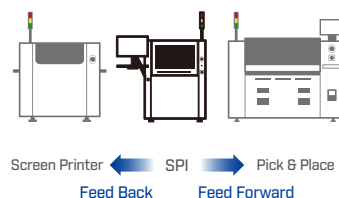
Large FOV

With a large FOV, with just a single imaging a larger and clearer image can be obtained to reduce the number of imaging to allow faster and accurate inspection



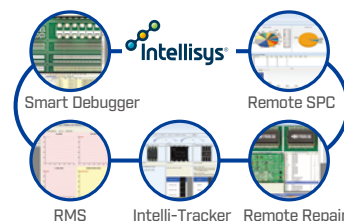
Closed-Loop System

When PCB surface and stencil mask position are incorrect, this information is feedback to the screen printer inspection



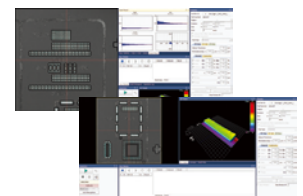
Intellisys® System

When a defect occurs in the line, understanding in advance as well as remote control is possible while reducing costs from defective products



GUI, Parameter Simultaneous Teaching

According to the user preferences a choice between easy and convenient graphic based on GUI teaching and figure based precise parameter value teaching can be made



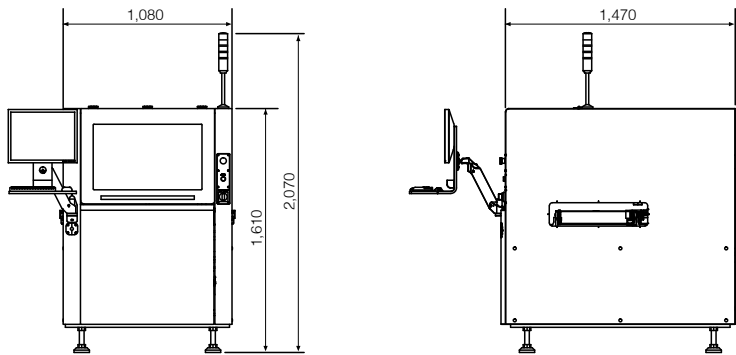
Specifications

Model			MS-11
PCB Size Range			
Single Stage Conveyor		Single Lane	50 x 50 - 510 x 510 mm
		Dual Lane	50 x 50 - 510 x 590 mm(Single) / 50 x 50 - 510 x 300 mm(Dual)
Triple Stage Conveyor (Option)		Single Lane	50 x 50 - 330 x 510 mm / 50 x 50 - 510 x 510 mm
Inspection Capability			
6 μm		0201 (mm) Solder Paste ±2 mm Warpage	
10 μm		0402 (mm) Solder Paste ±3 mm Warpage	
15 μm		0603 (mm) Solder Paste ±5 mm Warpage	
20 μm		0805 (mm) Solder Paste ±6 mm Warpage	
Inspection Technology			
3D Inspection Technology		Shadow Free - Moiré 3D Phase Step Image Processing	
Height Resolution		0.1 μm	
Height Accuracy	On a Calibration Jig	±1 %	
Height Repeatability	On a Calibration Jig	±0.5 μm	
Volume Repeatability	On a Calibration Jig	±2 %	
Solder Height		Maximum	600 μm (Option : 650 μm)
		Minimum	40 μm
Inspection Speed			
25 Megapixel Camera	CoaXPress	6 μm	1,800 mm² / Sec
15 Megapixel Camera	CoaXPress	10 μm	3,000 mm² / Sec
		15 μm	6,600 mm² / Sec
4 Megapixel Camera	Camera Link	10 μm	1,500 mm² / Sec
		15 μm	3,400 mm² / Sec
		20 μm	6,000 mm² / Sec
System Specification			
Software		Standard	Built-in SPC, Built-in Repair, GERBER PAD
		Option	RMS, RRS, IRS, QLTT, Remote SPC, ePM-SPI
PCB Top Side Clearance		20 mm	
PCB Bottom Side Clearance		50 mm	
PCB Thickness		0.5 mm - 5 mm	
Maximum PCB Weight		4 kg	
Robot Positioning System		X/Y Axis	Servo Motor System
Power Requirements		Single Phase(s) 200-240V 50-60Hz, 1.1 kW	
Air Requirements		5 Kg/ cm ² (0.5 MPa), 5 LPM	
Dimension and Weight			
Dimension	Machine		1,080(W) x 1,470(D) x 1,610(H) mm
	Width (Machine & Conveyor)	Single Stage Conveyor	1,110 mm
		Triple Stage Conveyor	1,270 mm(S size PCB) / 1,630 mm(M size PCB)
Weight	Single Lane		Approx. 950 kg
	Dual Lane		Approx. 1,000 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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