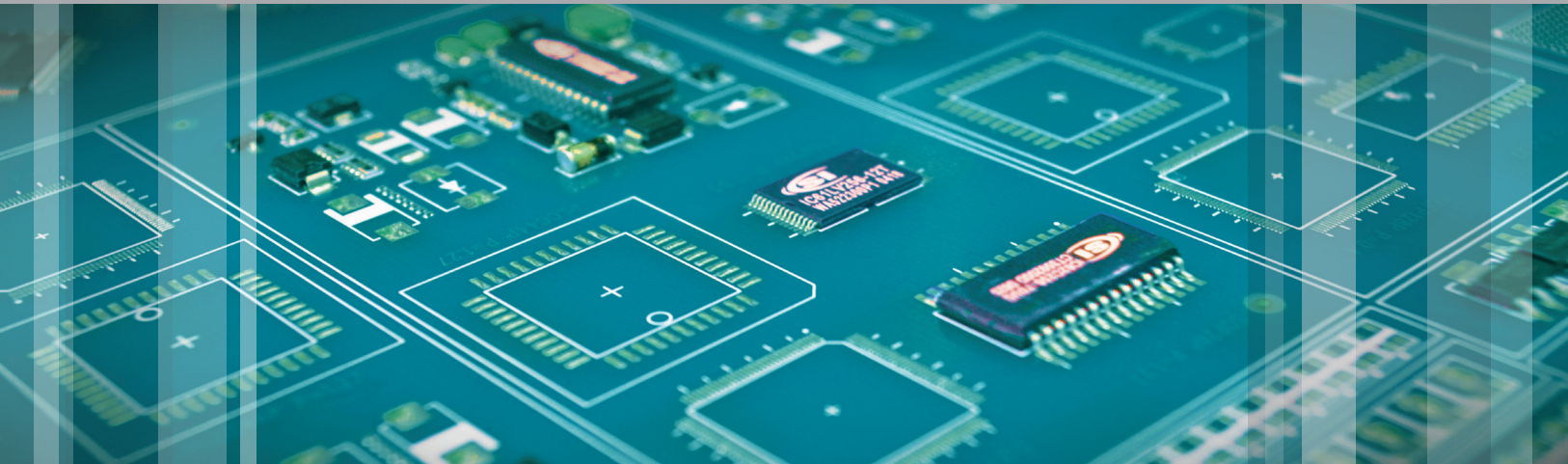


3D SPI Series

MS-15

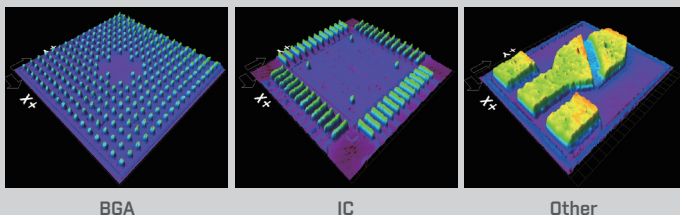


- 25 Megapixel Camera
- Dual Projection Probe
- X/Y Linear Motor System
- CoaXPress
- Warpage-free
- Intellisys® System

3D SPI Series

MS-15

MS-15 Series is a premium inline 3D SPI machine which inspects the solder amount status after the solder spread to clearly grasp the process and with 25 Megapixel camera contributing to productivity enhancements, 0201 [mm] size solder paste inspection is possible.

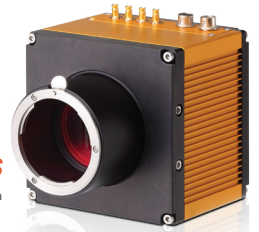


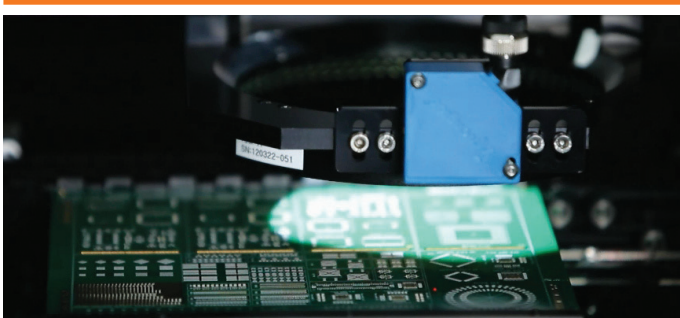
The World's First High Resolution 25 Megapixel Camera

We are proud to have applied the next generation vision system with 25 Megapixel / 6 μ m 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
- 6 μ m super precise lens to inspect 0201[mm] size pad
- Processing speed increased by 40% compared to Camera Link

CoaXPress
The Next Generation in High Speed Inspection

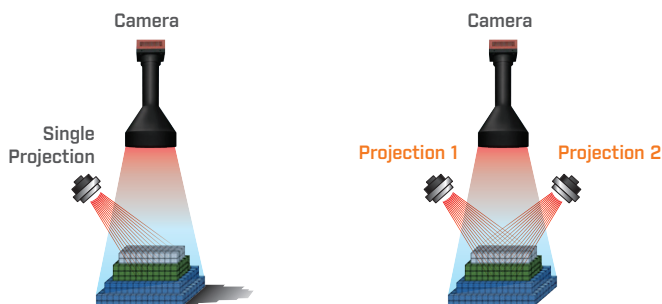




Dual Projection Probe

To reduce the errors 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 possibility due to shadowing effects are completely blocked.

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



Shadow effect with Single Projection Shadow free function with Dual Projection



Process Management System

By giving feedbacks of defect board data amongst each of the machines in the production line, root case trace and management can be done systemetically for production system to be improved and optimized.

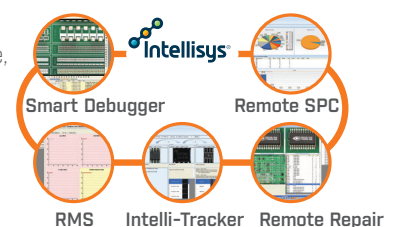
Closed-Loop System

When PCB surface and stencil mask position are incorrect, this information is feedbacked to Screen Printer



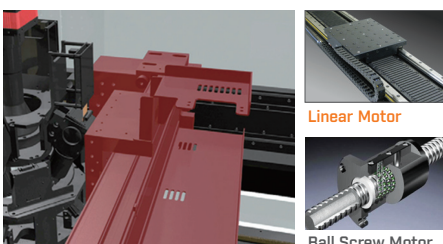
Intellisys[®] System

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



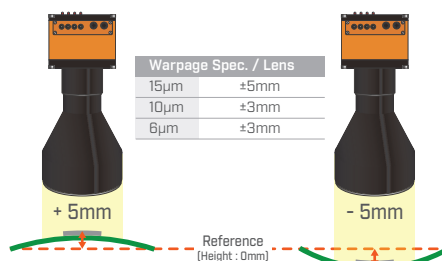
Linear Motor System

Compared to the previous Ball Screw, Linear Motor System has reduced noise and vibration while acquiring overwhelming enhanced speed, precision and life.



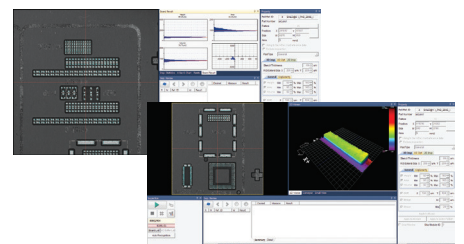
Warp-free System

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.



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.



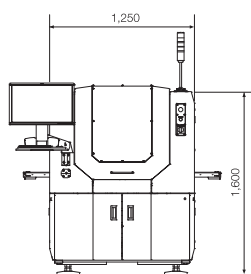
Specifications

Model			MS-15	MS-15U	MS-15DL
Max PCB Size Range					
Linear Motor System (mm)			50 x 50 ~ 510 x 460	60 x 60 ~ 660 x 610	50 x 50 ~ 330 x 250
Inspection Capability					
6μm			Min. 0201 (mm) Solder Paste ±2mm Warpage		
15μm			Min. 0402 (mm) Solder Paste ±3mm Warpage		
10μm			Min. 0603 (mm) Solder Paste ±5mm Warpage		
3D Inspection Technology					
3D Inspection Technology			Shadow Free - Moiré 3D Phase Step Image Processing		
Height Resolution			0.1μm		
Height Accuracy			±1%		
Height Repeatability			±1%		
Volume Repeatability			±2%		
Solder Height			Maximum		
			500μm		
			Minimum		
			40μm		
Maximum Inspection Speed					
25 Megapixel Camera	CoaXPress	6μm	1,800mm ² / Sec		
15 Megapixel Camera	CoaXPress	15μm	6,600mm ² / Sec		
		10μm	3,000mm ² / Sec		
System Specification					
PCB Top Side Clearance			20mm		
PCB Bottom Side Clearance			25mm		
Maximum PCB Weight			4kg		
Software			Built-in SPC, Built-in Repair		
			RRS, IRS, OLTT, SPC Server System, ePM-SPI		
Robot Positioning System		X/Y Axis	Precision Linear Drive Motor System		
Power Requirements		MS-15	Single Phase(s) 200-240V 50-60Hz, 1.1 KW		
		MS-15DL	Single Phase(s) 200-240V 50-60Hz, 1.5 KW		
Air Requirements			5 Kgf / Cm ² (0.5 Mpa)		
Dimension and Weight					
Dimension (mm)			1,250(W) x 1,500(D) x 1,600(H)	1,400(W) x 1,650(D) x 1,600(H)	1,250(W) x 1,500(D) x 1,600(H)
Weight			Approx. 1,200 Kg	Approx. 1,500 Kg	Approx. 1,400 Kg

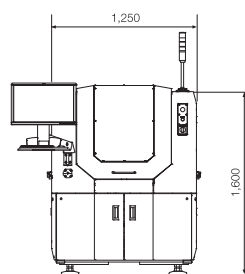
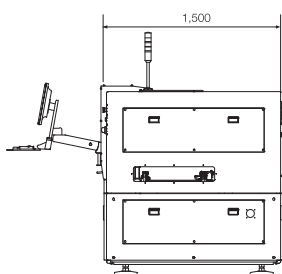
• We will not be responsible for any problems caused by using unverified BARCODE READER. Contact our HQ for the list of allowed BARCODE READER models to use.

Dimension

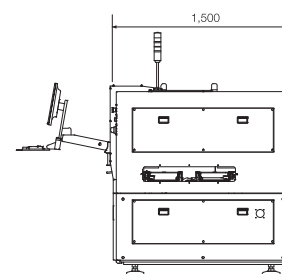
Unit: mm



MS-15



MS-15DL



MIRTEC CO., LTD (Headquarter)

SK Ventium 103-803, 166, Gosan-ro, Gunpo-si, Gyeonggi-do, 15850, Rep. of Korea

• TEL : +82-31-202-5999 • FAX : +82-31-202-5990

• www.mirtec.com

• Sales / CS : +82-1544-1062

• Data subject to change without notice.