

V5300 Series

Double-side Inspection
Inline AOI



Advanced Hardware Structure

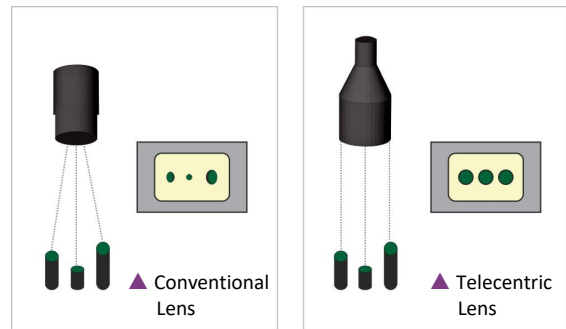
- Granite Platform and Frame**

Ensure the stability of the equipment and the consistency of sharing program between machines.



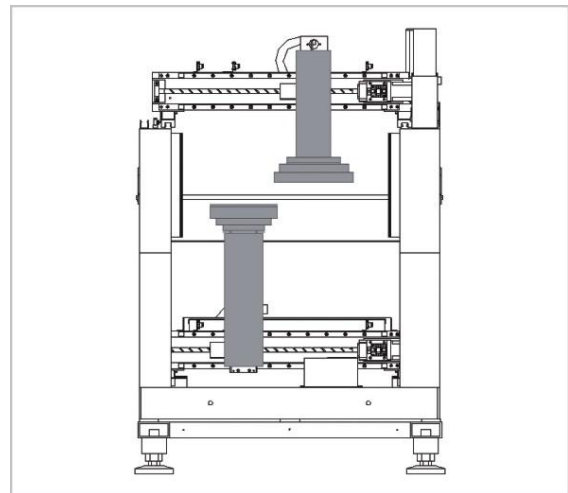
- Industrial Camera + Telecentric Lens**

The high component solder joint inspection is not affected as no shadow effect in the entire field of view.



- The Double-side Camera Synchronizes The X-Y Movement, Asynchronous Acquire The Image**

Perform the inspection on both sides simultaneously, and the light source does not interfere with each other, the inspection speed reaches the highest. The time for simultaneous inspection on both sides is almost the same as the time for single-sided inspection.



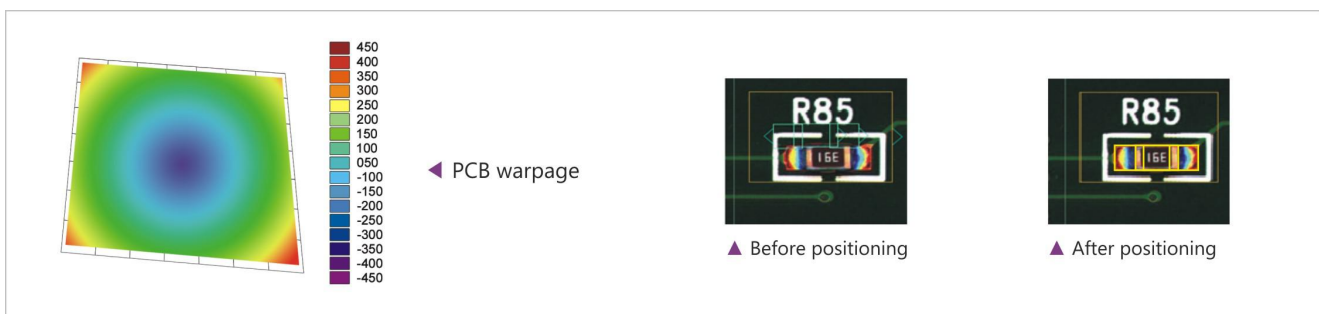
Core Technology and Advantages

- Solder Pad Position**

Solder pad position able to reduce high false call due to deformation of PCB after reflow, especially for FPC.

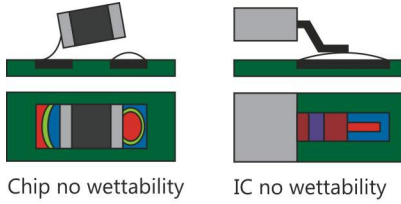
- Entire FOV Assist Positioning**

High detection ability on no exposed pad components (BGA, etc.) or partially shielded components.



Core Technology and Advantages

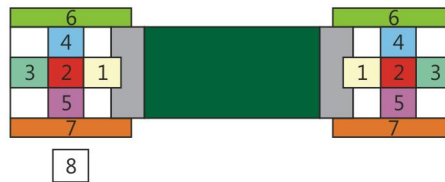
- Poor Soldering Inspection**—Based on precisely positioning on the solder pad, the features points of the entire solder pad will be analyzed. Therefore, the poor solder of chip or IC can be effectively detected.



Chip no wettability

IC no wettability

The shape of no wettability



MagicRay

- Accurately positioning pad
- Analysis 8 feature points

- Detection Parameters Directly Interface with IPC Standards**—Based on the IPC test standard, the test results are more reliable.

Shift: IPC-A-610-D Class 3 - If the component shift out of solder pad more than 25% of the component electrode, it will be NG.



▲ Solder pad positioning

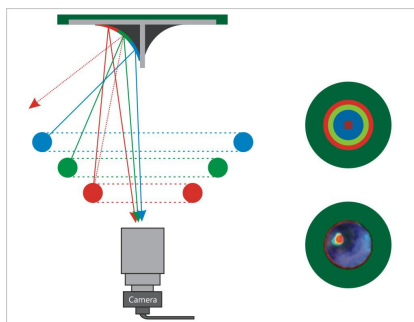


▲ Component body positioning



▲ The shift rate is based on component body to the solder pad

- Special Wave Soldering Algorithm for DIP Inspection**—Special wave soldering algorithm on hand insert and machine insert DIP inspection.



OK



Exposed copper

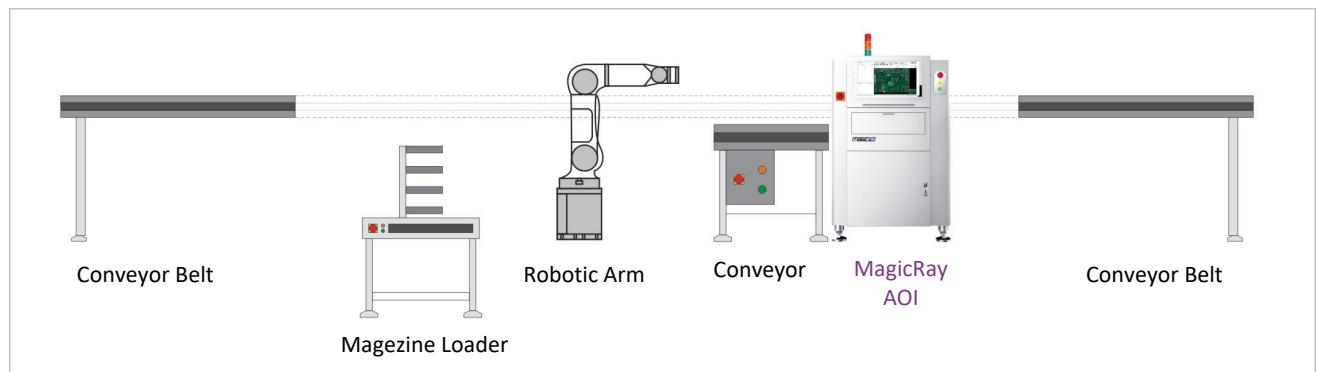


Nonwetting



Missing pin

- Unmanned Final Inspection Solution**—Final inspection after ICT/FT.



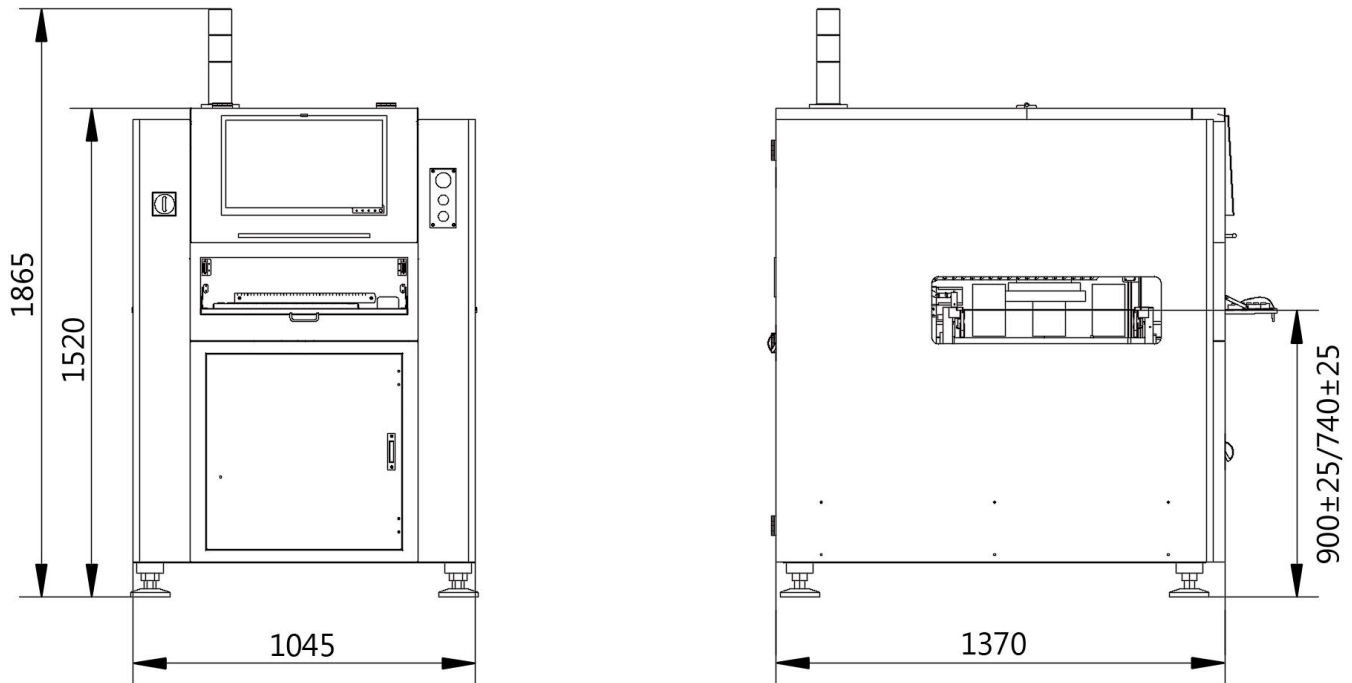
- Other Advantages**—Intelligent programming (One click rectification, Add substitute, Sub-programming ,etc.); Offline programming and fine tuning in real time without stopping the production line; Remote technical support...

Product Specification

Equipment Model		V5300	V5300S
Image System	Camera	5M pixels industrial camera	1200M pixels industrial camera
	Resolution(FOV)	24.5 μ m (58.8*49.0mm) /15 μ m (36*30mm) 可选	15 μ m (60.0*44.7mm)
	Lens	Telecentric lens	
	Lighting	4 color ring shape LED (RGB+W)	
Movement Structure	X/Y Movement	AC Servo Motor	
	Platform	Granite	
	Width Adjustment	Automatic	
	Transfer Method	Belt/ Roller (Set Before Delivery)	
	Board Loading Direction	Left to right or right to left (Set before delivery)	
	Fixed Lane	Front lane	
Hardware Configuration	Operating System	WINDOWS 10/WINDOWS 7	
	Communication	Ethernet, SMEMA	
	Power Requirement	Single phase 220V, 50/60Hz, 5A	
	Air Requirement	0.4-0.6Mpa	
	Conveyor Height	900 \pm 25mm/740 \pm 25mm (Set before delivery)	
	System Dimensions	L1045*D1370*H1520 (with tower light + 345)	
	Weight	950kg	
PCB Size	Size	50*50-510*510mm	
	Thickness	\leq 6.0mm	
	PCB Weight	\leq 10kg/ \leq 20kg	
	warping	\pm 3.0mm	
	Clearance	Top/Bottom: 25/25mm, Bottom Clearance 25-80mm adjustment,top clearance 25-80mm adjustment	
	Clamping Edge	3.0mm	
Inspection Categories	Post Reflow	Component:Wrong component,Missing,Polarity,Misalignment, Billboard,Reserve,Tombstone,IC lead bend,Foreign material	
		Solder Joint: No solder,Insufficient /Extra solder,Bridge,Poor soldering,Solder ball	
	After Wave Soldering	Component:Wrong component,Missing,Polarity,Misalignment, Billboard,Reserve,Tombstone,IC lead bend,Foreign material	
		Solder Joint: Insert pin,No solder,Insufficient/Extra solder,Hole,Open solder,Solder ball	
	Inspection Component	Chip: 03015 and above LSI: 0.3mm pitch and above Others: Odd shape component	
Inspection Speed	24.5 μ : 230-280ms/FOV (95cm ² /s) / 15 μ : 200-250ms/FOV (48cm ² /s)		

Disclaimer: MagicRay keeps on improving this product with continuous efforts in research,development and reengineering. Please contact us for the latest version of this specification sheet.

Equipment Size (Unit: mm)



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