SOUTHERN MACHINERY AOI Program

AOI machine



		IN LINE S-H680	OFF LINE S-L680
Machine system	Transmission and detection methods	Auto, L-R/R-L, Stepper motor to transport PCB and widen track, XY servo motor drive camera take picture	Manual . Y servo motor move PCB , X servo motor drive camera take picture
	PCB Size	50*50mm(Min)~400*360mm(Max)	20*20mm(Min)~460*350mm(Max)
	PCB Thickness	0.3 ~ 5.0mm	
	PCB Weight	Max: 3KG	
	PCB Margin	3mm, (can custom made)	
	PCB Curvature	< 5mm or 3% of PCB diagonal length	
	PCB Component H	Top: 35mm, Bottom: 75mm. Adjustable	
	XY Drive System	AC servo motor, precision ground ball screw	
	XY Moving speed	Max: 830mm/s	
	XY positioning accuracy	≤8um	
Parameter	Dimension	L980 * W960 * H1600 mm	L900 * W1100 * H1300 mm
	Power	AC220V/110V, 50/60Hz, 1.5KW	AC220V, 50/60Hz, 1.2KW
	PCB Conveyor Height	900±20mm	820±20mm
	Weight	600KG	360KG
	Communication Plug	Smema	
	Air Supply	0.5MPa, (Optional power distribution control)	No use
	Certification	Meet CE safety standards	
	Ambient temperature and humidity	$10 \sim 35^\circ C,~35 \sim 80\%$ RH $~(No~condensation)$	

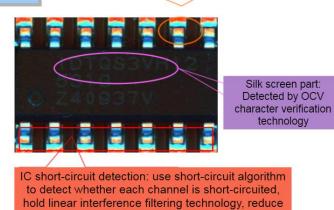
50mm X 50mm < **82mm X 120mm** < 400mm X 360mm PCB size is OK.

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AOI system

IC Inspection Method



false positives

Solder joint part: inspection by color

analysis feature method

Applicable process Solder paste before and after SMT reflow, before and after DIP wave soldering Manuor ,auto written, CAD data import automatic corresponding component library Programming mode Solder paste printing: presence, offset, less tin, more tin, open circuit, even tin, pollution, scratches, etc Detection type Defects in parts: missing parts, multiple pieces, offsets, skews, tombstones, sideways, flips, wrong parts, breakage, reverse, etc. Solder joint defects: more tin, solder, tin, solder balls, glue, pins not exposed, copper foil contamination. Detection application Calculation method Color calculation, color extraction, grayscale calculation, image contrast, etc Detection mode Optimized inspection technology covering the entire board, jigsaw and multi-mark, including Bad mark function SPC Statistical function Record test data and perform statistics and analysis throughout, and view production status and quality analysis in any area Component angle Support 0~359° rotation, minimum 1° angular distance Mini Component 15um/Pixel: 01005 chip、0.3 pitch IC Camera Full color high speed industrial digital camera Optical Lens resolution 10um/15um/18um/20um/25um configuration Light source Ring stereo multi-channel color light, depending on application selection RGB/RGBW/RGBR/RWBR CPU Intel core VGA NVIDIA 1GB+ RAM 4GB Computer HDD 500GB+ Win XP 32bit OS Monitor 22 inches(Top door), 16:10 22 inches, 16:10

ON LINE S-AO600C

Resistorsin size 0402 and fine pitches are no problem.

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OFF LINE S-AO680C



Final AOI Program

Conveyor: Transfer boards from the previous process.

AOI: Check PCBs.

Horizontally NG/OK Machine: Separate Good PCBs from Defective PCBs.



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