

True **3D** Smart Factory Solutions
Powered by the AI Platform

KY8030-3

The World's Fastest True 3D Solder Paste Inspection Solution



Real-Time Warp
Compensation



User Friendly Software



3D Measurement Based
SMT Process
Control System



Automated Solder Paste
Dispensing: Auto-Repair



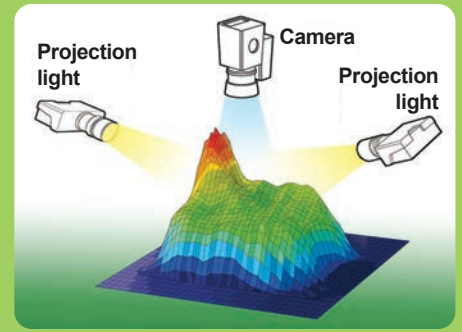
KY8030-3

World-Fastest True 3D Solder Paste Inspection



High Speed for Maximum Throughput Optional ✓

By achieving industry-leading inspection speeds of 0.24sec/FOV, KY8030-3 enhances productivity while speeding up processes.



➤ Dual Projection Technology

Using Koh Young's patented 3D dual-inspection technology, the KY8030-3 eliminates critical shadow problems all 3D SPI systems are vulnerable to.



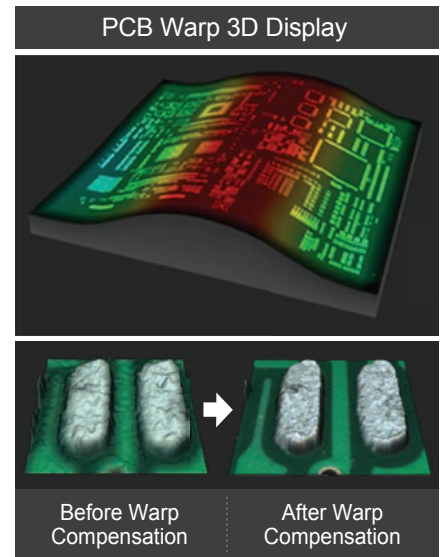
Real-Time Warp Compensation Optional ✓

○ Z-tracking 3D Compensation

The KY8030-3's moiré technology enables realtime measurement and compensation of board warp, solving the PCB Warp issues with respect to the ideal plane that impact inspection accuracy and reliability.

○ Pad Referencing 2D Compensation

The high-quality IR light provides for automatic for fast and easy reference teaching even without the CAD file. Moreover, the KY8030-3 allows manufacturers to match non-inspection objects (patterns and fiducial marks) on ideal PCB stencil designs with the ideal PCB pad locations defined by the CAD file in real time with minimum hassle.



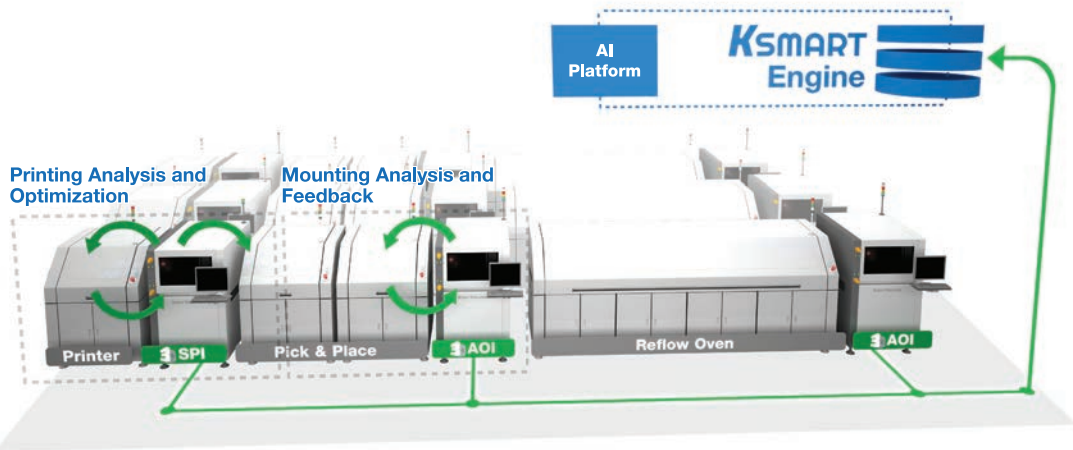
Automated Solder Paste Dispensing: Auto-Repair Optional ✓

KY8030-3 adds automated solder paste dispensing as an optional add-on. The high-precision, user-friendly dispensing system helps to eliminate costly mistakes due in large part to insufficient solder in open joints, lean fillets, and weak joints. The KY8030-3's automatic dispensing option repairs such issues before pass through, resulting in enhanced first pass yield and reduced operational costs.

Test Results	BEFORE	AFTER	Test Results	BEFORE	AFTER																																								
Small Sized Pad			BGA Pad																																										
3D Image View																																													
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KSMART: Cutting-Edge Process Optimization Tools for Smart Factory Realization



KSMART Process Optimizer

Optional

KPO Module Apps for Screen Printers



The KSMART Process Optimizer assists with real-time communication of monitoring data from the screen printing processes including insufficient paste, excessive paste, shape deformity based on 3D volume and shape measurements, as well as instances of no paste, bridging, and placement errors.

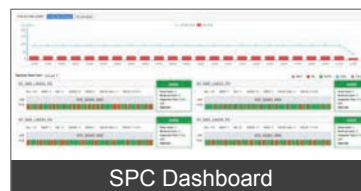
Real-time alerts prevent print quality problems and monitor printer hardware engagement and print ready status via Pre DOE, while automatically optimizing printer parameters. It provides real-time alarms based on printing quality during DOE through PDM Lite and verification of printing results following application of recommended parameters resulting in significant print quality improvements and increased yield.



SPC@KSMART

Optional

The KY8030-3 also comes with a reliable 3D-Data based Statistical Process Control which lets manufacturers evaluate data using an intuitive graphic interface.



SPC Dashboard



Inspection Analysis

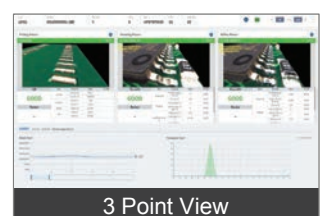
It also helps increase the speed of root-cause analysis to provide users with enhanced equipment uptime.



Link@KSMART

Optional

The KY8030-3 module allows for clear three-dimensional visualization of SPI-AOI communication to review printing, pick-and-place and reflow processes. The system traces defects to their origin and then stores the inspection results from Koh Young's 3D SPI and 3D AOI Systems for later use in data review and overview of the entire production process.



3 Point View

Must-check Requirements of 3D SPI System



Requirements	Solutions																																
Solution to Shadow Problem	• 3D Shadow-Free Moiré Technology & Dual Projection																																
Real time PCB Warp Compensation (2D+3D Solution)	• Warp Compensation (Z-tracking + Pad Referencing (optional))																																
Operator User-friendliness	• Renewal GUI, Real Color 3D Image																																
Inspection Range	• Up to 2mm (4 Way Projection / optional)																																
Foreign Material Inspection	• 3D Foreign Material Inspection																																
Inspection Items	<ul style="list-style-type: none"> • Metrology Capability • Types of Defects 																																
Inspection Performance	<table border="1"> <thead> <tr> <th></th> <th>10µm</th> <th>15µm</th> <th>20µm</th> </tr> </thead> <tbody> <tr> <td>Camera Resolution</td> <td>20×20mm(0.79×0.79 inches)</td> <td>30×30mm(1.18×1.18 inches)</td> <td>40×40mm(1.57×1.57 inches)</td> </tr> <tr> <td>FOV Size</td> <td colspan="3">13.7~43.5 cm²/sec (Inspection speed varies by PCB and inspection condition.)</td> </tr> <tr> <td>Full 3D Inspection Speed with High Speed Option</td> <td colspan="3">16.2 ~ 50.8 cm²/sec (Inspection speed varies by PCB and inspection condition.)</td> </tr> <tr> <td>Min. Distance between Paste Deposit</td> <td>100µm (3.94 mils)</td> <td>150µm (5.91 mils)</td> <td>200µm (7.87 mils)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • 4M Pixel Camera • IR-RGB LED Dome Style Illumination (Optional) • 0.37µm • 1µm • < 10% at 6σ <table border="1"> <tbody> <tr> <td>Max. Inspection Size</td> <td>10×10mm</td> <td colspan="2">0.39×0.39 inches</td> </tr> <tr> <td>Max. Inspection Height</td> <td>400µm</td> <td colspan="2">15.75 mils</td> </tr> <tr> <td>Min. Distance between PADs</td> <td>100µm (based on 150µm paste height)</td> <td colspan="2">3.94 mils (5.91 paste height)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Possible 		10µm	15µm	20µm	Camera Resolution	20×20mm(0.79×0.79 inches)	30×30mm(1.18×1.18 inches)	40×40mm(1.57×1.57 inches)	FOV Size	13.7~43.5 cm ² /sec (Inspection speed varies by PCB and inspection condition.)			Full 3D Inspection Speed with High Speed Option	16.2 ~ 50.8 cm ² /sec (Inspection speed varies by PCB and inspection condition.)			Min. Distance between Paste Deposit	100µm (3.94 mils)	150µm (5.91 mils)	200µm (7.87 mils)	Max. Inspection Size	10×10mm	0.39×0.39 inches		Max. Inspection Height	400µm	15.75 mils		Min. Distance between PADs	100µm (based on 150µm paste height)	3.94 mils (5.91 paste height)	
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PCB Handling	<ul style="list-style-type: none"> • Conveyor Width Adjustment • Conveyor Fix Type 																																
Software	<ul style="list-style-type: none"> • Supported Input Format • Programming S/W • Statistical Process Control Tool • Operator User-friendliness • Operating System 																																
Add-on Solutions	<ul style="list-style-type: none"> • 1D & 2D Handy Barcode Reader • 1D & 2D Inline Barcode Reader • Offline Programming Station • Offline SPC Plus Station • Standard Calibration Target • UPS 																																

※ Above specifications are subject to change without notice.

※ Machine dimensions, PCB size and clearance will change if the Auto-Repair option is selected.

	M		L		XL	
	Single Lane	Dual Lane	Single Lane	Dual Lane	Single Lane	Dual Lane
Max. PCB Size (X x Y)	330 X 330 mm (12.9 x 12.9 inches)	Single Mode: 330x580 mm (12.9x22.8 inches) Dual Mode: 330 x 325.5 mm (12.9x12.8 inches)	510 x 510 mm (20.0 x 20.0 inches)	Single Mode: 510 x 580 mm (20.0x22.8 inches) Dual Mode: 510 x 320 mm (20.0x12.5 inches)	850 x 690 mm (33.4 x 27.1 inches)	Single Mode: 850 x 580 mm (33.4x22.8 inches) Dual Mode: 850 x 320 mm (33.4x12.5 inches)
Min. PCB Size	50 x 50 mm (1.9 x 1.9 inches)				70 x 70 mm (2.7 x 2.7 inches)	
PCB Thickness	0.4 ~ 4 mm (0.01 ~ 0.15 inches)		0.4 ~ 5 mm (0.01 ~ 0.19 inches)		0.6 ~ 8 mm (0.02 x 0.31 inches)	
Max. PCB Weight	Standard: 2 kg (4.4 lbs), Heavy weight option: 5 kg (11.0 lbs)				10 kg (22.0 lbs)	
Machine Weight	550 kg (1212.5 lbs)	600 kg (1322.7 lbs)	600 kg (1322.7 lbs)	700 kg (1543.2 lbs)	850 kg (1873.9 lbs)	900 kg (1984.1 lbs)
Bottom Clearance	50 mm (1.9 inches)					
Supplies	200~240VAC, 50/60Hz Single Phase, 5Kgf/cm ² (0.45MPa)					
W	820mm(32.2 inches)	820mm(32.2 inches)	1000mm(39.3 inches)	1000mm(39.3 inches)	1350mm(53.1 inches)	1350mm(53.1 inches)
D	1265mm(49.8 inches)	1445mm(56.8 inches)	1265mm(49.8 inches)	1445mm(56.8 inches)	1445mm(56.8 inches)	1445mm(56.8 inches)
H	1627mm(64.0 inches)	1627mm(64.0 inches)	1627mm(64.0 inches)	1627mm(64.0 inches)	1627mm(64.0 inches)	1627mm(64.0 inches)

