

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

KY8030-2

Worlds Best Selling True 3D Solder Paste Inspection



Real-Time Warp
Compensation



3D Measurement Based
SMT Process
Control System

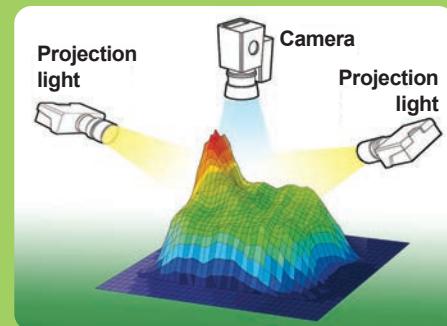


Automated Solder Paste
Dispensing: Auto-Repair



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➤ Dual Projection Technology

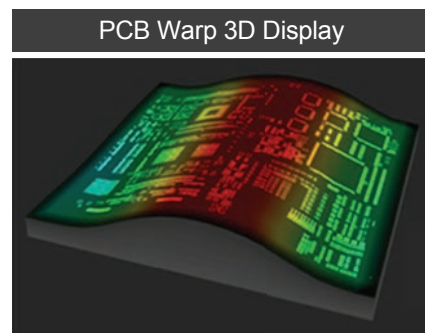
Using Koh Young's patented 3D dual-inspection technology, the KY8030-2 eliminates critical shadow problems all 3D SPI systems are vulnerable to.



Real-Time Warp Compensation

◦ Z-tracking 3D Compensation

The KY8030-2'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.



Automated Solder Paste Dispensing: Auto-Repair

Optional ☒

KY8030-2 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 KY8030-2's automatic dispensing option repairs such issues before pass through, resulting in enhanced first pass yield and reduced operational costs.

Test Results

Small Sized Pad

	BEFORE	AFTER
3D Image View		
Volume	30.24 %	78.38 %
Height	86.68 um	92.26 um
Area	31.4 %	76.46 %
OffsetX	0.001 mm	0.001 mm
OffsetY	-0.008 mm	-0.005 mm

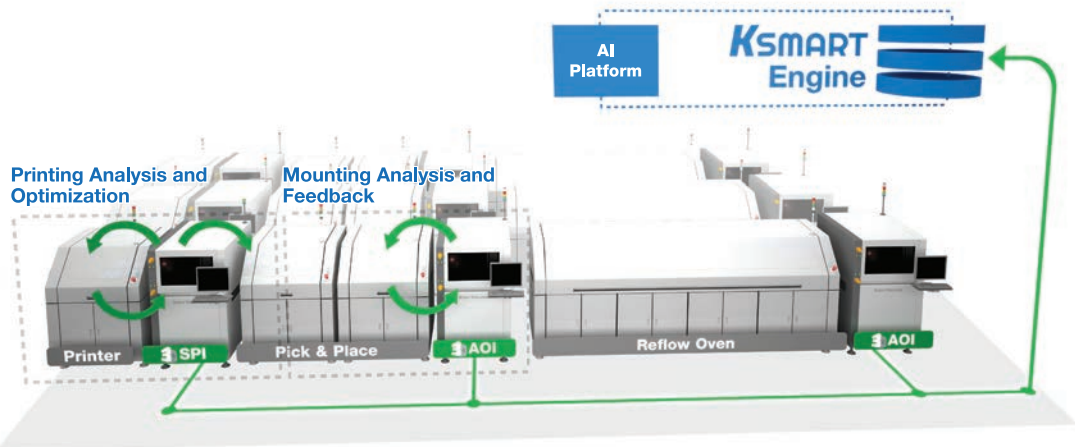
Test Results

BGA Pad

	BEFORE	AFTER
3D Image View		
Volume	22.4 %	74.64 %
Height	51.86 um	71.71 um
Area	38.87 %	93.68 %
OffsetX	-0.001 mm	-0.001 mm
OffsetY	0.004 mm	0.004 mm



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.

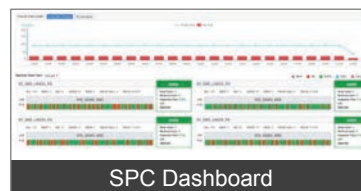


SPC @KSMART

Optional ☒

The KY8030-2 also comes with a reliable 3D-Data based Statistical Process Control which lets manufacturers evaluate data using an intuitive graphic interface.

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



SPC Dashboard



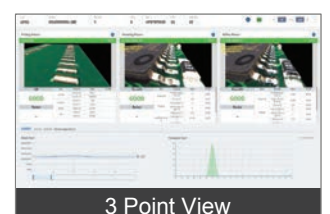
Inspection Analysis



Link @KSMART

Optional ☒

The KY8030-2 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)		
Operator User-friendliness		• Renewal GUI, Real Color 3D Image(optional)		
Inspection Items	Metrology Capability			
	Types of Defects	• Volume, Area, Height, Offset, Bridging, Shape Deformity, Coplanarity • Insufficient/Excessive/Missing Paste, Bridging, Shape Deformity, Paste Offset, Coplanarity		
Inspection Performance	Camera Resolution	15μm	20μm	25μm
	FOV Size	30×30mm(1.18×1.18 inches)	40×40mm(1.57×1.57 inches)	50×50mm(1.97×1.97 inches)
	Full 3D Inspection Speed	22.5~56.1 cm²/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)
	Camera	• 4M Pixel Camera		
	Illumination	• IR-RGB LED Dome Styled Illumination (optional)		
	Z Resolution	• 0.37μm		
	Height Accuracy (on KY Calibration target)	• 1μm		
	01005 Inspection Capacity Gage R&R (±50% tolerance)	• < 10% at 6σ		
	Max. Inspection Size	10×10mm	0.39×0.39 inches	
	Max. Inspection Height	400μm (2mm optional)	15.75 mils (78.74 mils optional)	
	Min. Distance between PADS	100μm (150μm paste height)	3.94 mils (5.91 paste height)	
	Various colored PCB Inspection	• Possible		
PCB Handling	Conveyor Width Adjustment	• Automatic		
	Conveyor Fix Type	• Front / Rear Fixed (factory setting)		
Software	Supported Input Format	• Gerber Data (274X, 274D), ODB++ (optional)		
	Programming S/W	• ePM-SPI		
	Statistical Process Control Tool	• SPC@KSMART - Histogram, X-bar & R-Chart, X-bar & S-Chart, Cp & Cpk, %Gage R&R - Real Time SPC & Multiple Display - SPC Alarm		
		• Remote Monitoring System		
		• Library Manager@KSMART		
	Operator User-friendliness	• KYCal: Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration		
Operating System	• Windows 7 Ultimate 64bit			
Add-on Solutions	• 1D & 2D Handy Barcode Reader		• Remote Monitoring System	
	• 1D & 2D Inline Barcode Reader		• Review Station	
	• Offline Programming Station		• KSMART Process Optimizer	
	• Offline SPC Plus Station		• IR-RGB Light	
	• Standard Calibration Target		• Link@KSMART	
	• UPS		• SPC@KSMART	
			• Auto-Repair*	

※ 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, 5Kg/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)

