

# KY8030-2

## The Industry's **Most Popular True 3D** Solder Paste Inspection Solution

The KY8030-2 has maintained the industry's leading position as the best-selling True 3D Solder Paste Inspection System since entering the market. Combining Koh Young's patented 3D dual-inspection Moiré projection technology, it effectively eliminates critical shadow and specular reflection challenges other 3D inspection systems simply cannot address.



**Best-in-class Measurement Accuracy and Inspection Reliability**



**Active Warp Compensation**



**Automated Solder Paste Dispensing: Auto-Rework**



**KSMART Solutions:  
True 3D Measurement-based  
Process Control System**



**Zero-defect through AI-Powered  
Koh Young Process Optimizer(KPO)**



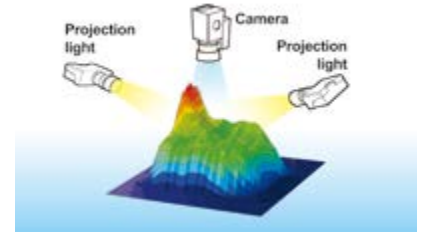
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## Best-in-class Measurement Accuracy and Inspection Reliability

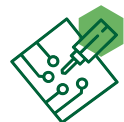
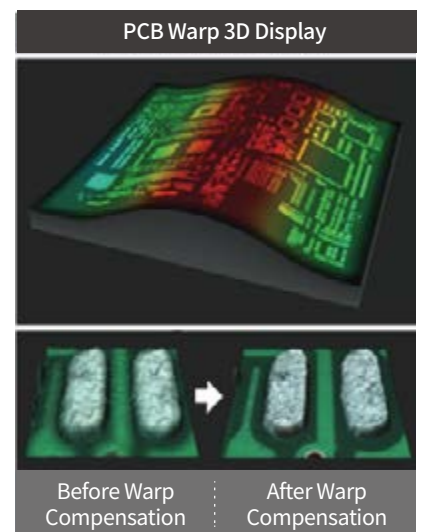
- Koh Young's inspection systems have become the industry standard. The KY8030-2 features a pioneering True 3D Moiré and dual-direction projection by eliminating shadow and specular reflection challenges without compromising accuracy.



## Active Warp Compensation

### Z-tracking 3D compensation

The unique Koh Young warp compensation technology actively calculates and detects any substrate warpage. Using its exclusive 3D imaging and algorithms, Koh Young considers multiple elements like slope, stretch, twist, bow, and shrinkage to guarantee an accurate measurement and to meet the ultimate inspection system criteria.



## Automated Solder Paste Dispensing: Auto-Rework

- KY8030-2 dispenses solder paste automatically as an optional add-on solution. The high-precision and user-friendly dispensing system helps eliminate costly mistakes due in large part to insufficient solder in open joints, lean fillets, and weak joints. The automatic dispensing option reduces operational costs, improves line efficiency, and strengthens profitability by eliminating board scrap and rework. Once Koh Young's SPI is configured with the Auto-Rework option, it becomes more than an inspection system. It becomes a true process optimizer.

Test Results

Small Sized Pad

Before	
Volume	30.24 %
Height	86.68 $\mu\text{m}$
Area	31.4 %
Offset X	0.001 mm
Offset Y	-0.008 mm

After	
Volume	78.38 %
Height	92.26 $\mu\text{m}$
Area	76.46 %
Offset X	0.001 mm
Offset Y	-0.005 mm

Test Results

BGA Pad

Before	
Volume	22.4 %
Height	51.86 $\mu\text{m}$
Area	38.87 %
Offset X	-0.001 mm
Offset Y	0.004 mm

After	
Volume	74.64 %
Height	71.71 $\mu\text{m}$
Area	93.68 %
Offset X	-0.001 mm
Offset Y	0.004 mm

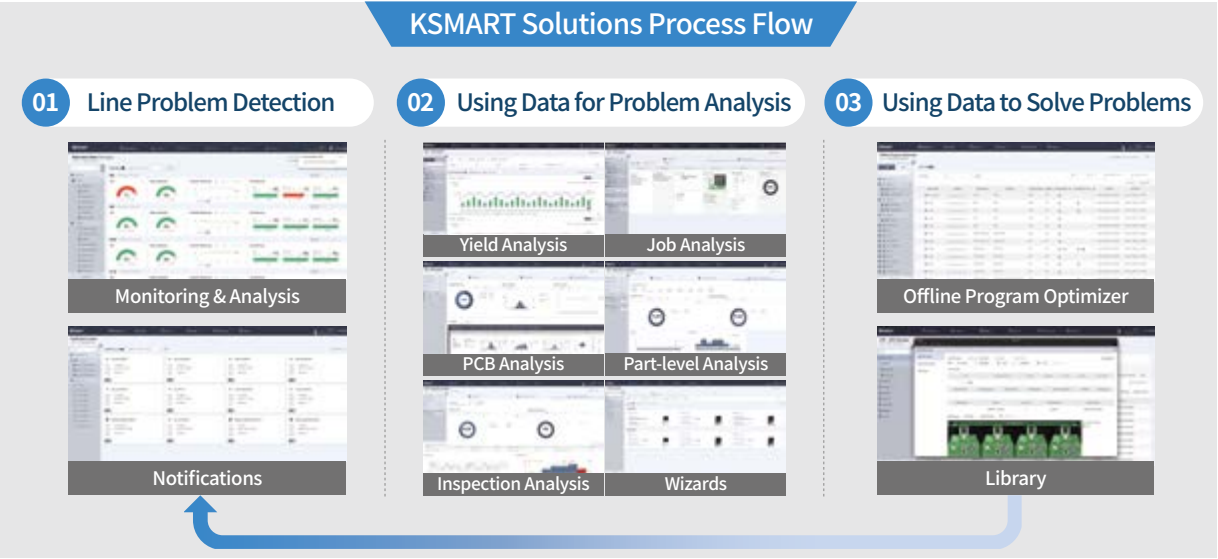


# KSMART Solutions: True 3D Measurement-based Process Control System

- Koh Young pioneered True 3D measurement technology 20 years ago to create a zero-defect future. This gave rise to KSMART Solutions and its continuous efforts to leverage data and connectivity.
- KSMART Solutions uses Artificial Intelligence to help automate process control while focusing on data management, analysis, and optimization. It collects data from across the factory line for defect detection, real-time optimization, enhanced decisions, and traceability to improve metrics, increase quality, and lower costs by eliminating variance, false calls, and escapes.

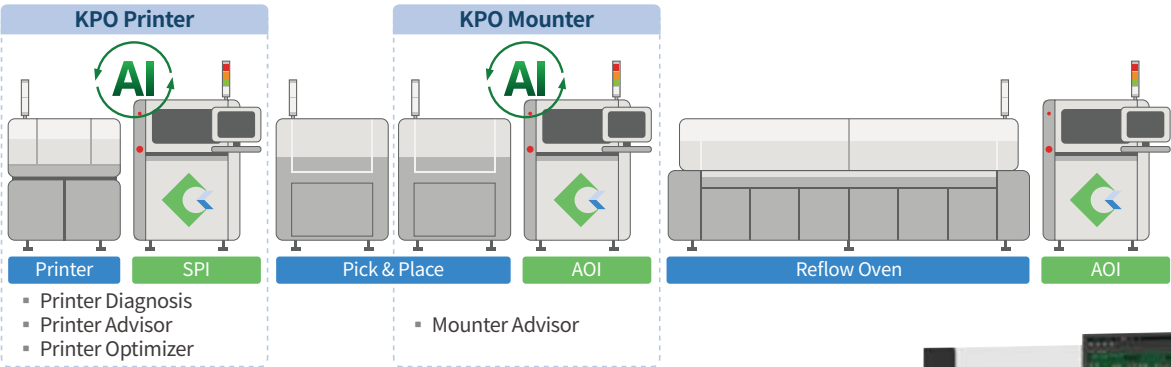
## “KSMART Solutions is the Gateway to a Smart Factory”

- Converts data into knowledge for effective and quality-driven actions
- Delivers an AI-powered process analysis and optimization tool
- Achieves an autonomous process optimization facility



## Zero-defect through AI-Powered Koh Young Process Optimizer (KPO)

- Koh Young is driven to help customers achieve a Zero-defect print process scenario. The AI-powered Koh Young Process Optimizer (KPO) solution automatically exercises complex algorithms to develop and implement print process improvements. By actively monitoring the print process, KPO sends operators real-time performance diagnostics and threshold alerts – it even implements process change automatically. KPO ensures real-time print process reliability without dedicated experts.



“Everyone knows solder paste printing is the core of quality. If you do not get it right at this stage, nothing else matters. We had large boards with around 4000 parts and 50 different BGAs and finding a vendor was difficult. We were very happy to see our yields increase overnight when we installed our first Koh Young SPI system.

- EMS VP Operations



# Must-check Requirements of a 3D SPI System

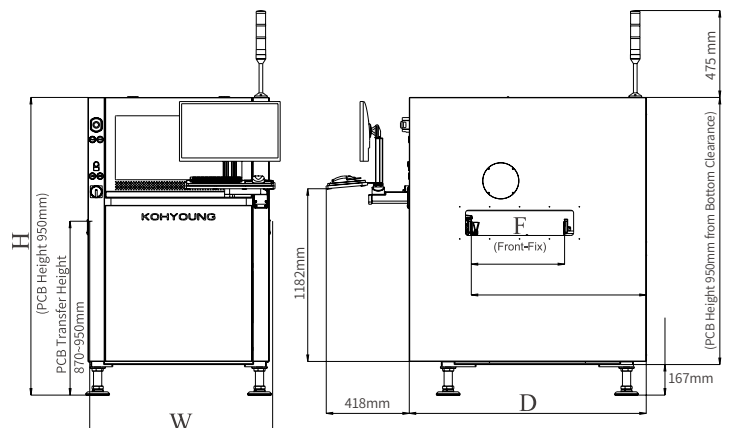
Requirements				Solutions		
Solution to Shadow Problem				3D Shadow Free Moiré Technology & Dual Projection		
PCB Warp Compensation				Active Warp Compensation (Z-Tracking)		
User Friendly Operation				Renewal GUI, Real Color 3D Image		
Whole-board Foreign Material Inspection				3D Foreign Material Inspection		
Inspection Items	Metrology Capability		Volume, Area, Height, Offset, Bridging, Shape Deformity, Paste Offset, Coplanarity			
	Types of Defects		Insufficient, Excessive, Missing Paste, Bridging, Shape Deformity, Paste Offset, Coplanarity			
KY8030-2 Inspection Performance	Model	Camera & Resolution	FOV Size	Full 3D Inspection Speed	Minimum Distance Between Pads	Max. Inspection Height
	KY8030-2	4M 10um	20 x 20	11.1 cm²/sec (0.36 Sec/FOV)	100 um / 4.0 mils	450 um / 17.7 mils
		4M 15um	30 x 30	23.7 cm²/sec (0.38 Sec/FOV)	150 um / 5.9 mils	
		4M 20um	40 x 40	40.0 cm²/sec (0.40 Sec/FOV)	200 um / 7.9 mils	
		4M 25um	50 x 50	59.5 cm²/sec (0.42 Sec/FOV)	200 um / 7.9 mils	
	Illumination		IR-RGB Led Dome Styled Illumination			
	Z Resolution		0. 37 um / 0.01 mils			
	Height Accuracy(on KY Calibrated Target)		1 um / 0.04 mils			
	01005mm Inspection Capacity Gage R&R (±50% Tolerance)		< 10% at 6 sigma			
Max. Inspection Size		< FOV				
Multi-Colored PCB Inspection		Possible				
PCB Handling	Conveyer Width Adjustment		Automatic			
	Conveyer Fix Type		Front / Rear Fixed (Factory Setting)			
Software	Supported Input Format		GERBER Data (274X, 274D), ODB++ (Optional)			
	Programing Software		ePM-SPI			
	Statistical Process Control Tool		SPC Plus (Histogram, X-bar & R-Chart, X-bar & S-Chart, Cp & Cpk, % Gage R&R / Real Time SPC & Multiple Display / SPC Alarm / Automatic Report from Remote Computer)			
	User-Friendly Operator		Library Manager & KYCAL (Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration)			
	Operating System		WINDOWS 10 IoT ENTERPRISE LTSC 2019			
Add-On Solutions	- 1D & 2D Handy Barcode Reader - 1D & 2D Inline Barcode Reader - Auto-Verification - Auto-Rework* - UPS - Integrated Calibration Target - Long Board Option		- Offline Programming Station - ODB++ - SPC Plus for Remote Computer - Offline SPC Plus Station - Review Station - Panasonic APC Interface (FF/FB) - Fuji Nexim Interface - IPC-CFX Interface		- KSMART Solutions (Monitoring and Analysis, Remote Access, Offline Program Optimizer, Link Data Analysis, Notification)  - KPO Printer (Printer Diagnosis, Printer Advisor, Printer Optimizer)	

The above specifications are subject to change without notice.

\* Machine dimensions, PCB Size, and clearance will change if the Auto-Rework 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 in)	Single Mode °	510 x 510 mm (20.0 x 20.0 in)	Single Mode °	850 x 690 mm (33.4 x 27.1 in)	Single Mode
		330 x 580 mm (12.9 x 22.8 in)		510 x 580 mm (20.0 x 22.8 in)		850 x 580 mm (33.4 x 22.8 in)
		Dual Mode		Dual Mode		Dual Mode
		330 x 325.5 mm (12.9 x 12.8 in)		510 x 320 mm (20.0 x 12.5 in)		850 x 320 mm (33.4 x 12.5 in)
Min. PCB Size	50 x 50 mm (1.9 x 1.9 in)				70 x 70 mm (2.7x2.7 in)	
PCB Thickness	0.4 ~ 4 mm (0.01 ~ 0.15 in)		0.4 ~ 5 mm (0.01 ~ 0.19 in)		0.6 ~ 8 mm (0.02 ~ 0.31 in)	
Max. PCB Weight	Standard : 2kg (4.4 lbs), Heavy weight option : 5kg (11.0 lbs)				10kg (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 in)					
Supplies	220 Vac ± 10%, 50/60Hz , 1 Phase, 5Kgf/cm² (0.45MPa)					
W	820 mm (32.2 in)		1000 mm (39.3 in)		1350 mm (53.1 in)	
D	1265 mm (49.8 in)	1445 mm (56.8 in)	1265 mm (49.8 in)	1445 mm (56.8 in)	1445 mm (56.8 in)	
H	1627 mm (64.0 in)					

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° Please contact us for more information about PCB Sizes.



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