

aSPIre3

The Industry's Highest Performing True 3D Solder Paste Inspection Solution

The aSPIre3 delivers the highest standard in the metrology-level True 3D SPI market, ensuring incomparable performance for the most demanding applications. This inspection system leverages Koh Young's AI platforms for print process optimization with the award-winning Koh Young Process Optimizer (KPO).



The Highest Standard in
Metrology-level 3D Inspection



Beyond Solder Paste Inspection



Self-Diagnosis for Optimal
Performance Maintenance



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



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





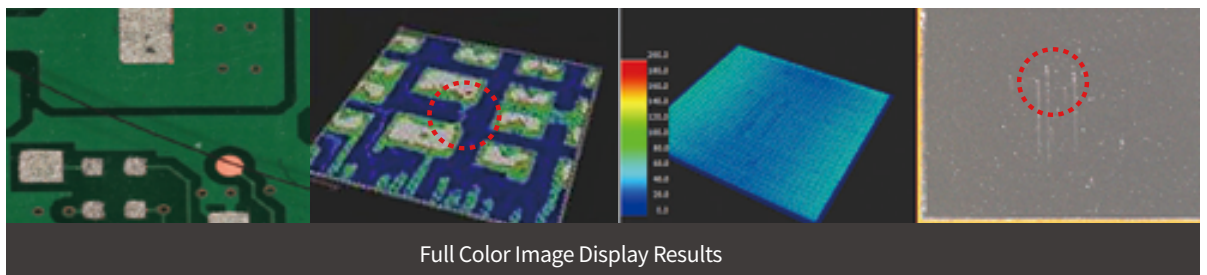
The Highest Standard in Metrology-level 3D Inspection

- The aSPIre3 incorporates proprietary and multi-direction projection technology delivering outstanding accuracy and repeatability required to measure the emerging 03015M components used in high-volume production. Furthermore, the aSPIre3 sets a higher standard in metrology-level 3D inspection by overcoming inspection challenges like shadow and specular reflection, as well as board warp and non-linear challenges.



Beyond Solder Paste Inspection

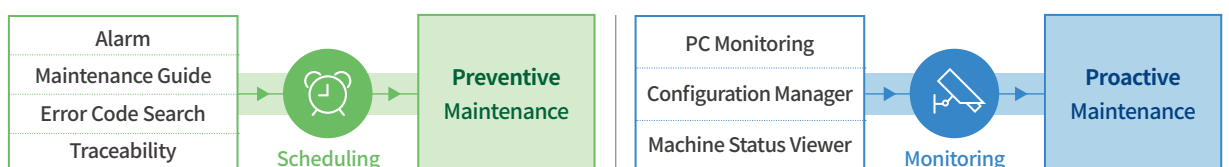
- Inspection is not limited to just solder deposits. Koh Young's SPI system provides whole-board foreign material inspection (WFI), conductive glue, sinter paste inspection with full color image display results.



Self-Diagnosis for Optimal Performance Maintenance

- Unscheduled downtime can cripple production. Self-Diagnosis allows operators to take precautionary measures through predictive maintenance in order to reduce process interruptions, enhance uptime, and ensure optimal machine performance.
- The Self-Diagnosis feature comes with distinct modules which offers periodical machine checkups on critical items such as 3D/2D light intensity, PZT feed, height accuracy, and XY offset.

Self-Diagnosis on its way to Predictive Maintenance



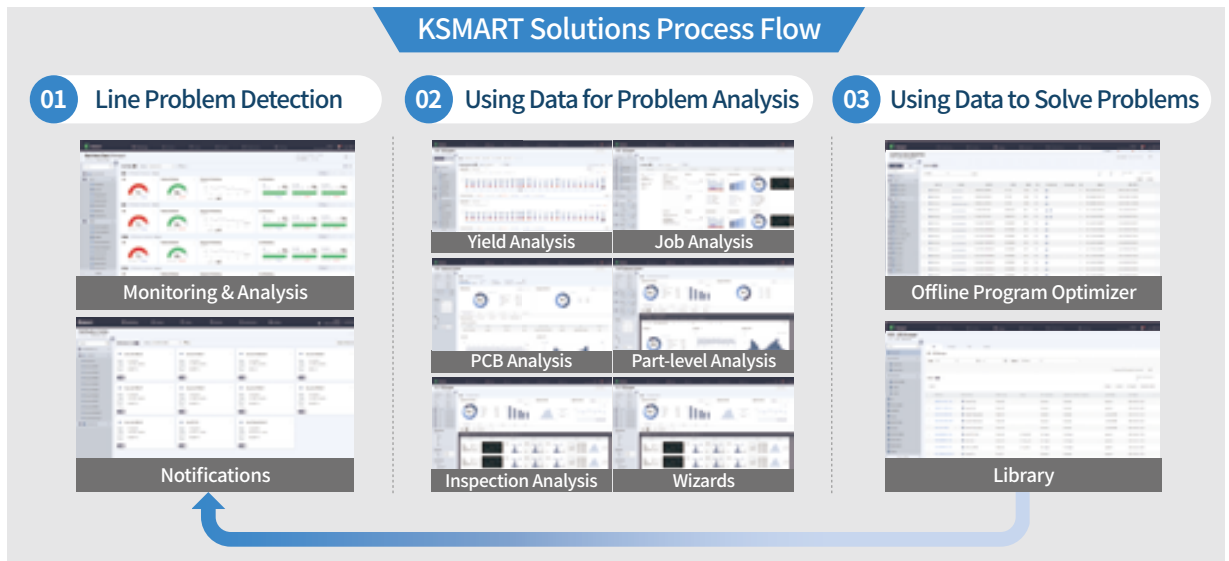


KSMART Solutions: True 3D Measurement-based Process Control System

- 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.

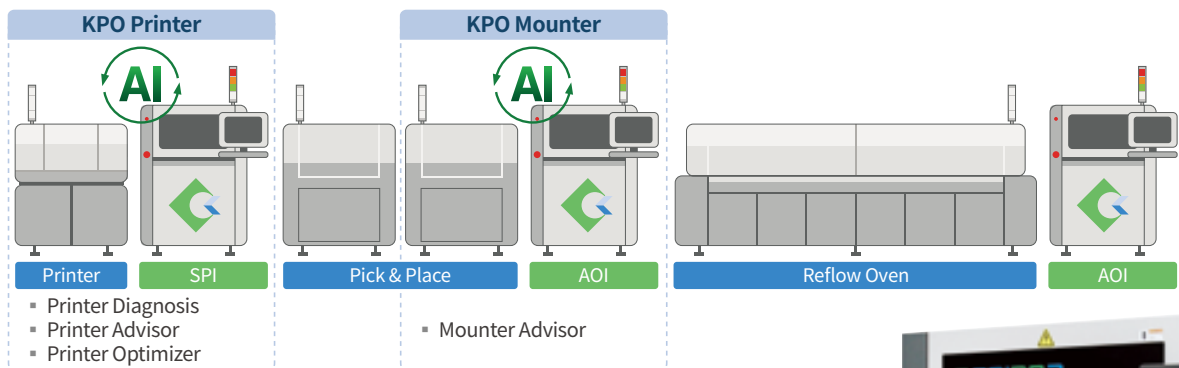
“KSMART Solutions is the Gateway to a Smart Factory”

- 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.



“Koh Young’s True 3D SPI systems have contributed greatly to guaranteeing great quality products for our customers. Their strong and dedicated global support organization has also been a great value to our worldwide production facilities. We look forward to more fruitful partnership in coming years.” - Top Tier Global Automotive Company



Specification

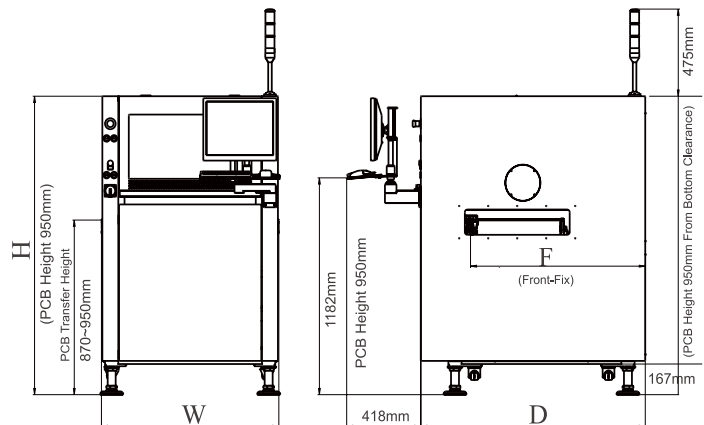
Requirements		Solutions					
Solution to Shadow Problem		3D Shadow Free Moiré Technology & Quad Projection					
PCB Warp Compensation (2D + 3D Solution)		Active Warp Compensation (Z-Tracking & Pad Referencing)					
User Friendly Operation		Renewal GUI, Real Color 3D Image					
Foreign Material, Sinter Paste, Conductive Glue 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					
aSPIre3 Inspection Performance	Model	Camera & Resolution	FOV Size	Full 3D Inspection Speed	Minimum Distance Between Pads	Inspection Height (Max & Min)	
	aSPIre3	8M 15um	42 x 42	40.1 cm ² /sec (0.44 FOV/Sec)	150um	1000um / 300um 39.4 mils / 11.8 mils	
		12M 10um 12M 15um	41 x 31 61 x 46	28.2 cm ² /sec (0.45 FOV/Sec) 58.5cm ² /sec (0.48 FOV/Sec)	100um 150um		
	Illumination		IR-RGB Led Dome Styled Illumination				
	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 - Standard 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.

	L		XL	
	Single Lane	Dual Lane	Single Lane	Dual Lane
Max. PCB Size (X x Y)	490 x 510mm (19.2 x 20.0in)	Single Mode ^o	830 x 690mm (32.6 x 27.1in)	Single Mode
		490 x 580mm (19.2 x 22.8in)		830 x 580mm (32.7 x 22.8in)
		Dual Mode		Dual Mode
Min. PCB Size	50 x 50mm (1.9 x 1.9in)		70 x 70mm (2.7 x 2.7in)	
PCB Thickness	0.4 ~ 5mm (0.01 ~ 0.19in)		0.4 ~ 5mm (0.01 ~ 0.19in)	
Max. PCB Weight	5kg (11.0lbs)		10kg (22.0lbs)	
Machine Weight	600kg (1322.7lbs)	700kg (1543.2lbs)	850kg (1873.9lbs)	900kg (1984.1lbs)
Bottom Clearance	50mm (1.9in)			
Supplies	220 Vac ± 10%, 50/60Hz, 1 Phase, 5Kgf/cm ² (0.45MPa)			
W	1000mm (39.3in)		1350mm (53.1in)	
D	1295mm (50.9in)	1475mm (58.0in)	1475mm (58.0in)	1475mm (58.0in)
H	1727mm (67.9in)			

The above specifications are subject to change without notice.
^o Please contact us for more information about PCB Sizes.



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