

True **3D** now Powered by Intelligent Platform
for Smart Factory



ZENITH LiTE

World-Class True 3D Automated Optical Inspection



Perfect True 3D
Inspection Performance



Perfect PCB
Warp Compensation



Quick and Simple
Inspection Condition
Setting



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World-Class True 3D Automated Optical Inspection

Koh Young's true 3D inspection system provides solutions for conventional inspection problems.

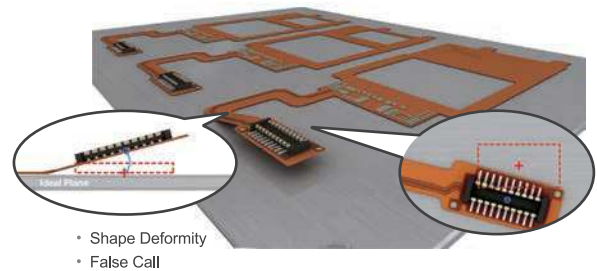


Perfect PCB Warp Compensation Solution

Optional

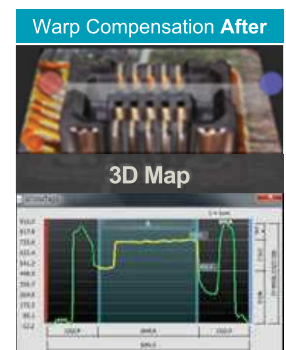
PCB Environment after Reflow

- FPCB
- Slope
- Height Differences
- Local Board Warp/Rotation/ Shrinkage/Expansion



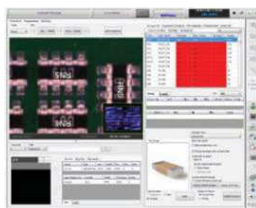
Minimization of False Call

- Koh Young's Warp Compensation provides a revolutionary solution to PCB warpage.



Fast and Intuitive Programming : Template Management

- Easy inspection condition setting and modification based on quantified inspection result
- Reducing programming time in 'Package Registration' + 'Inspection Condition Setting'



- Non-registered package



- Package registration : Choose package type : Choose component type



- Apply selected package

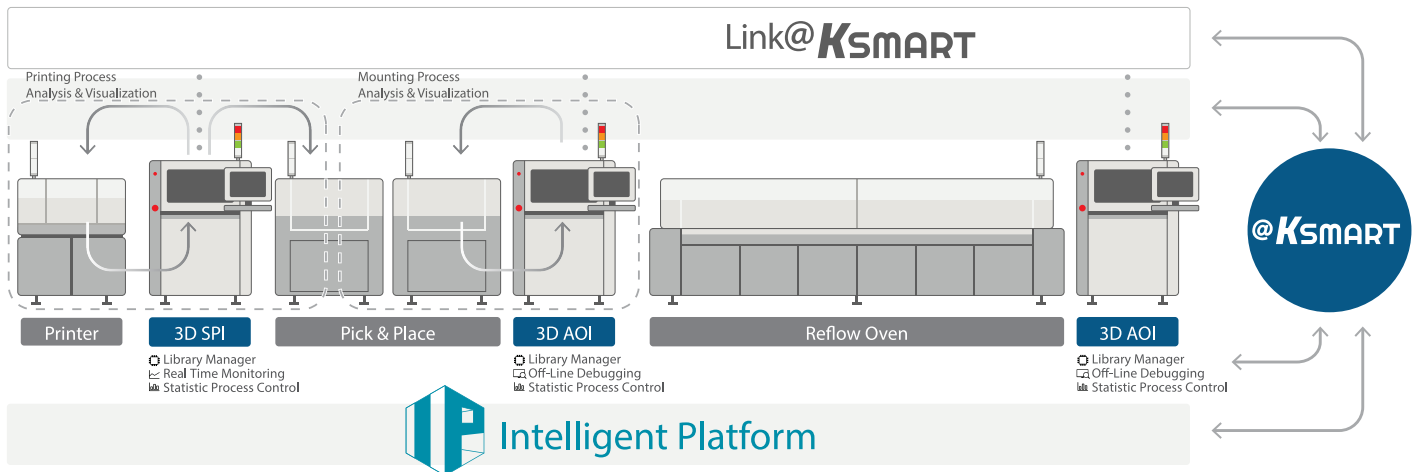


- Select relevant template registered on the server

Approx. 2 Times Faster



Intelligent Platform to Realize Fully Automated Process Optimization : Smart Factory



SPC@KSMART

Optional

Reliable 3D Data based Statistical Process Control

- Carry out essential analyses from an intuitive graphical interface
- Accelerate root cause analysis for increased equipment uptime



OLD(Off-Line Debugging) @KSMART

Optional

Minimum Downtime for Job Fine-tuning

- On-time fine-tuning without stopping production line
- Automatically deploys modified inspection conditions starting from the next PCB



LM(Library Manager) @KSMART

Job Management

- Store & distribute Job files and inspection conditions from centralized DB to multiple SPIs
- Changes and modifications after process optimization are easier to manage

User Level Management

- Can set up user level groups with different authorities
- Each user's work history is traceable via user log data



Link@KSMART

Optional

3D data based SPI-AOI communication solution

- Review, diagnosis and optimization of printing, pick-and-place and reflow process
- Traces root cause of defects by storing and communicating inspection results from Koh Young's 3D SPI and 3D AOI Systems



Must-check Requirements of 3D AOI System



Requirements	Solutions		
Shadow Problem Solution	<ul style="list-style-type: none"> • 3D Shadow Free Moiré Technology & 4 Way Projection • Multi-Frequency Moiré Technology • Warp Compensation (Pad Referencing + Multi-Frequency Moiré Technology) • True 3D Measurement 		
Specular Problem Solution			
Shadowed Area between Tall Components			
Small (01005 inch) Component Insepection			
Wide Measurement Range + Accuracy (Measurement Range Problem)			
Real time PCB Warp Compensation			
Dark component & White Body Component Location			
Component Body, Lead Coplanarity Inspection			
Solder Joint Profile Inspection			
3D Polarity Inspection			
Component Crack Inspection			
Inspection Items	Inspection Task		
Inspection Performance	Camera Resolution	15µm	20µm
	FOV Size	30×30mm (1.18×1.18 inch)	40×40mm (1.57×1.57 inch)
	Full 3D Inspection Speed	22.9~33.6 cm²/sec (Inspection speed varies by PCB, and inspection condition.)	
	Height Accuracy (on KY Calibration Target)	• ±3%	
	Camera	• 4M Pixel High Speed Camera	
	Illumination	• IR-RGB LED Dome Styled Illumination	
	Max. Measurement Height	• 5mm	
PCB Handling	Conveyor Width Adjustment	• Automatic	
Conveyor Fix Type	• Front / Rear Fixed (factory setting)		
Software	Supported Input Format	• Gerber data (274X, 274D), ODB++, Placement file, Mounter JOB file, Allegro, Zuken, Mentor (optional)	
	Programming S/W	• ePM-AOI, AOI GUI	
	Operating System	• AOI GUI	
	Statistical Process Control Tool	• SPC@KSMART	
	Operator User-friendliness	• Review Station	
	Operating System	• Remote Monitoring System	
	• Library Manager@KSMART		
	• KYCal: Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration		
	• Intel i7-3970X (6Core), 32GB, Window 7 Ultimate 64bit		
Add-on Solutions	<ul style="list-style-type: none"> • 1D & 2D Handy Barcode Reader • 1D & 2D Inline Barcode Reader • Offline Programming Station • SPC@KSMART 	<ul style="list-style-type: none"> • Offline SPC Pro Station • Standard Calibration Target • Remote Monitoring System • OLD@KSMART 	<ul style="list-style-type: none"> • Warp Compensation • Foreign Material Inspection • Review Station

※ Above specifications are subject to change without notice.

	M	L	DL	XL
Max. PCB Size	330×330mm (13×13 inch)	510×510mm (20×20 inch)	Dual: 510×320mm (20×12.6 inch) Single: 510×580mm (20×22.8 inch)	850×690mm (33.4×27.1 inch)
Min. PCB Size	50×50mm (1.97×1.97 inch)			70×70mm (2.7×2.7 inch)
PCB Thickness	0.4~5mm (0.015~0.20 inch)			0.5~8mm (0.02~0.31 inch)
Max. PCB Weight	Ring Belt : 2kg(4.4 lbs), Timing Belt : 5kg(11 lbs)			10kg(22 lbs)
Machine Weight	550kg(1212 lbs)	600kg(1322 lbs)	700kg(1543 lbs)	850kg(1874 lbs)
Bottom Side Clearance	50mm(1.97 inch)			
Supplies	200~240VAC, 50/60Hz Single Phase, 5Kgf/cm²			
W	820mm(32.2 inch)	1000mm(39.3 inch)	1000mm(39.3 inch)	1350mm(53.1 inch)
D	1295mm(50.9 inch)	1295mm(50.9 inch)	1475mm(58.0 inch)	1475mm(58.0 inch)
H	1727mm(67.9 inch)			
F	985mm(38.7 inch)		1165mm(45.8 inch)	

