

True  now Powered by Intelligent Platform
for Smart Factory 

aspire3

Worlds Best Performance 3D Solder Paste Inspection

-  Ultra High Speed
-  Complete Process Solutions
-  Highest Accuracy



aSPIre3

Worlds Best Performance 3D Solder Paste Inspection



➤ **Quad Projection Technology**
aSPIre3 delivers the most accurate and repeatable 3D inspection results without shadow problems.



Setting a Higher Standard with Metrology-Level 3D Inspection

Ultra High Speed



03015 inspection

aSPIre2
15um
32.8cm²/sec

➤

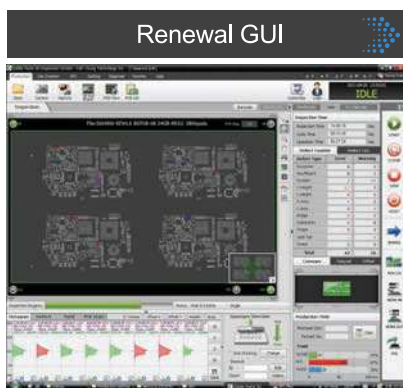
aSPIre3
2 Times Faster

- **Fast 03015 Components Inspection**
 - Accurate and repeatable measurement values with doubled throughput
 - Unrivalled and unique 03015 measurement capability helping realize today's IT innovations



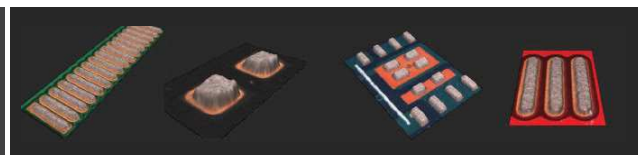
True 3D Foreign Material Inspection on Whole PCB Area

- Optimized display for the user with smart menu groupings
- Supports user's defect readability and system usability by more intuitive software
- Detects a wide range of defects using real images and 3D data



Renewal GUI

Real Color 3D Image



True 3D Foreign Material Inspection





Integrated SW Solutions to Realize Fully Automated Process Optimization: Industry 4.0



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



Auto-Verification

Optional

◦ Maintain Optimal Machine Conditions

- Periodical checks on critical items : 2D/3D Light Intensity, PZT Feed, Height Accuracy, XY Offset
- Guide users to take preventive actions so that SPI can maintain optimal conditions

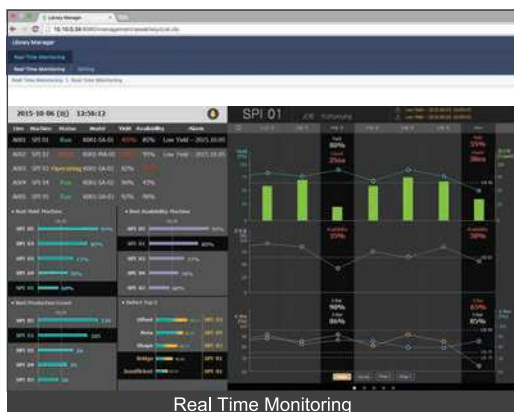
◦ Minimum Downtime for Maintenance

- Auto-verify machine conditions during operation to reduce unwanted machine downtime



Real Time Monitoring

Optional



◦ Process Optimization

- Provides analysis data for real-time multi-line management
- Provides comparison data of each machines and lines
- Manage machine status for all production lines from remote locations

◦ Multi-line Production Info

- Machine status, model info, yield, alarm
- Best production, yield, availability machine ranking chart and defect top 5 info
- Detailed history chart : Height, Volume, Offset for the selected line

Must-check Requirements for a 3D SPI System



Requirements	Solutions		
Shadow Problem Solution	<ul style="list-style-type: none"> 3D Shadow Free Moiré Technology & 4 Way Projection 		
Specular Problem Solution			
Reference Plane Shadow Solution			
Directional Problem Solution			
Real Time PCB Warp compensation (2D+3D Solution)			
Operator User-friendliness	<ul style="list-style-type: none"> Warp Compensation (Pad Referencing + Z-tracking) Renewal GUI, Real Color 3D Image 		
Foreign Material Inspection			
Inspection Items	Metrology Capability	<ul style="list-style-type: none"> Volume, Area, Height, Offset, Bridging, Shape Deformity, Coplanarity Insufficient/Excessive/Missing Paste, Bridging, Shape Deformity, Paste Offset, Coplanarity 	
	Types of Defects		
Inspection Performance	Camera Resolution	10 μ m	15 μ m
	FOV Size	40.96 x 30.72 mm (1.61 x 1.21 inch)	61.44 x 46.08 mm (2.42 x 1.81 inch)
	Full 3D Inspection Speed	29 ~ 63 cm ² /sec	
	Camera	<ul style="list-style-type: none"> 12M Pixel Camera 	
	Illumination	<ul style="list-style-type: none"> IR-RGB LED Dome Styled Illumination 	
	Z Resolution	<ul style="list-style-type: none"> 0.37 μm 	
	Height Accuracy (on KY Calibration target)	<ul style="list-style-type: none"> 1 μm 	
	01005 Inspection Capacity Gage R&R (\pm 50% tolerance)	<ul style="list-style-type: none"> < 10% at 6σ 	
	Max. Inspection Size	10 x 10 mm	0.39x0.39 inch
	Min. Distance between PADs	100 μ m (150 μ m paste height)	3.94 mils (5.91 mils paste height)
Various colored PCB Inspection	<ul style="list-style-type: none"> Possible 		
PCB Handling	Conveyor Width Adjustment	<ul style="list-style-type: none"> Automatic 	
	Conveyor Fix Type	<ul style="list-style-type: none"> Front / Rear Fixed (factory setting) 	
Software	Supported Input Format	<ul style="list-style-type: none"> GERBER Data (274X, 274D), ODB++ 	
	Programming S/W	<ul style="list-style-type: none"> ePM-SPI 	
	Statistical Process Control Tool	<ul style="list-style-type: none"> SPC@KSMART <ul style="list-style-type: none"> - Histogram, X-bar & R-Chart, X-bar & S-Chart, Cp & Cpk, %Gage R&R - Real Time SPC & Multiple Display - SPC Alarm Remote Monitoring System 	
	Operator User-friendliness	<ul style="list-style-type: none"> Library Manager@KSMART KYCal: Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration 	
	Operating System	<ul style="list-style-type: none"> Windows 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 Auto Verification ODB++ 	<ul style="list-style-type: none"> Offline SPC Plus Station Standard Calibration Target Remote Monitoring System Link@KSMART SPC@KSMART

※ Above specifications are subject to change without notice.

	L		XL	
	Single Lane	Dual Lane	Single Lane	Dual Lane
Max. PCB Size	490 x 510 mm (19.2 x 20 inch)	490 x 580 mm (19.2 x 22.8 inch)	830 x 690 mm (32.6 x 27.1 inch)	Single Mode : 830 x 580 mm (32.6 x 22.8 inch) Dual Mode : 830 x 320 mm (32.6 x 12.5 inch)
Min. PCB Size	50 x 50 mm (1.96 x 1.96 inch)		70 x 70 mm (2.75 x 2.75 inch)	
PCB Thickness	0.4 ~ 5 mm (0.01 ~ 0.19 inch)		0.6 ~ 8 mm (0.02 ~ 0.31 inch)	
Max. PCB Weight	5 kg (11 lbs)		10 kg (22 lbs)	
Machine Weight	600 kg (1322 lbs)	650 kg (1433 lbs)	850 kg (1874 lbs)	900 kg (1984 lbs)
W	1000 mm (39.3 inch)	1000 mm (39.3 inch)	1350 mm (53.1 inch)	1350 mm (53.1 inch)
D	1280 mm (50.4 inch)	1460 mm (57.4 inch)	1460 mm (57.4 inch)	1460 mm (57.4 inch)
H	1727 mm (67.9 inch)	1727 mm (67.9 inch)	1727 mm (67.9 inch)	1727 mm (67.9 inch)
F	985 mm (38.7 inch)	985 mm (38.7 inch)	1165 mm (45.8 inch)	1165 mm (45.8 inch)
Supplies	200~240VAC, 50/60Hz Single Phase, 5Kgf/cm ²			

