

## 3D Solder Paste Inspection Machine (3D SPI)

### 3Si Series

High resolution 7 μm model

High end 12 μm model

High speed 18 μm model



**QUALITY DRIVEN** Production



**SAKI's 3Si series with advanced technology results in line quality improvement.**

Saki combines proprietary hardware and software to produce a stable, highly accurate system that improves production and maximizes process efficiency and product quality.

### Hardware: Key Driver of High Quality

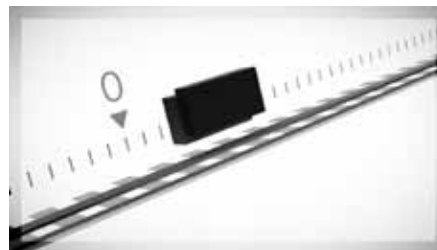
#### ■ Optical Head

A newly developed 7μm optical head with CoaXPress interface inspects 0201mm(008004in) pads for semiconductor packaging applications.



#### ■ Gantry

A robust, rigid gantry platform, coupled with a dual motor drive system and closed-loop linear scale, provide machine accuracy and repeatability for absolute measurements.



Linear scale image

#### ■ Conveyor System

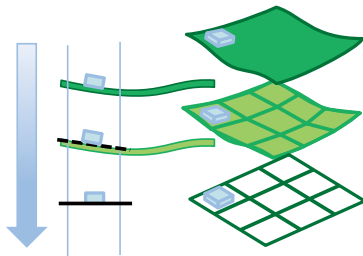
Improved loading speed, conveyor system modifications, and enhanced linear scale accuracy increase throughput and factory operation.



### Software: Enables Enhanced Capabilities

#### ■ Warpage Adjustment

Proprietary warpage adjustment software technology yields stable inspection results for flexible printed circuit boards.



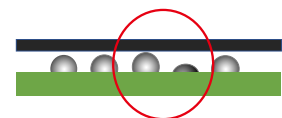
#### ■ SPC Function

The SPC function optimizes threshold and traceability by tracking fluctuations in movements.

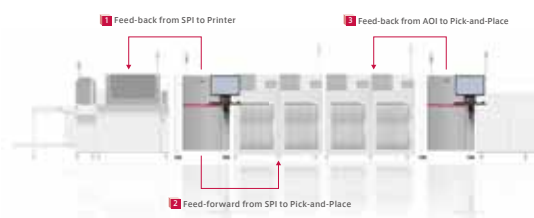


#### ■ Coplanarity Inspection

Analyzing BGA inspection variations in conjunction with accompanying solder paste inspection results improves micro and fine-pitch pad coplanarity.



### SAKI's M2M Solution



#### 1 Feed-back from SPI to Printer

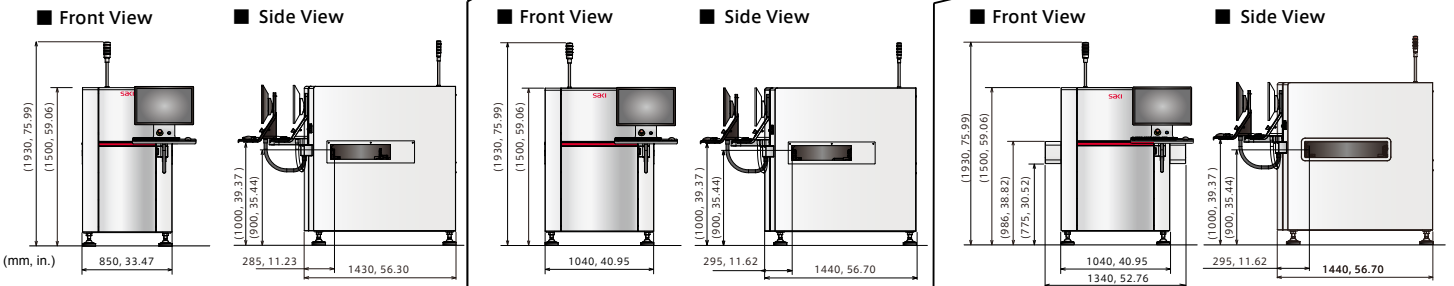
SPI data is fed to the printer in real time to make corrections and avoid defects. An automated system alerts the user when the stencil needs cleaning.

#### 2 Feed-forward from SPI to Pick-and-Place

Placement and alignment data are fed to the pick-and-place machine in real time. A No Good Board Skip function reduces waste, costs, and improves process quality and efficiency.

## 3Si Series Product Specifications

Market	Asia		Global			
Dimensions	M/ Single lane	M/ Dual lane	L/ Single lane	L/ Dual lane	XL/ Single lane	
SPI Model Name	3Si-MS2	3Si-MD2	3Si-LS2	3Si-LD2	3Si-ZS2	
Size (W) × (D) × (H) (mm, in.)	850×1430×1500, 33.46×56.30×59.06		1040×1440×1500, 40.94×56.69×59.06		1340×1440×1500, 52.75×56.69×59.06	
Horizontal Resolution	7 μm / 12 μm / 18 μm				18 μm	
Height measurement range	500 μm					
Weight	850kg, 1873.93lb		900kg, 1984.16lb		900kg, 1984.16lb	
Electric Power	Single Phase~200 to 240V+/- 10%, 50/60Hz					
Air Requirement	0.5MPa,5L/min(ANR)					
PCB Size (mm, in.)	50×60~330×330, 1.97×2.36~ 12.99×12.99	Single mode	Dual mode	Single mode	Dual mode	50×60~686×870, 1.97×2.36~27.00×34.25
		50×60~330×330, 1.97×2.36~ 12.99×12.99	50×60~320×330, 1.97×2.36~ 12.60×12.99	50×60~500×510, 1.97×2.36~19.68×20.07	50×60~320×330, 1.97×2.36~ 12.99×12.99	
PCB Clearance	Top : 40mm, 1.57in. Bottom : 60mm, 2.36in.	Top : 40mm, 1.57in. Bottom : 50mm, 1.96in.	Top : 40mm, 1.57in. Bottom : 60mm, 2.36in.	Top : 40mm, 1.57in. Bottom : 50mm, 1.96in.	Top : 40mm, 1.57in. Bottom : 60mm, 2.36in.	



## 3Si Series Optical Unit Specifications

Resolution	7 μm	12 μm	18 μm
Image capture time	1,063mm <sup>2</sup> /s 1.64in. <sup>2</sup> /s	5,500mm <sup>2</sup> /s 8.52in. <sup>2</sup> /s	6,400mm <sup>2</sup> /s 9.92in. <sup>2</sup> /s
← High definition		High speed →	

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