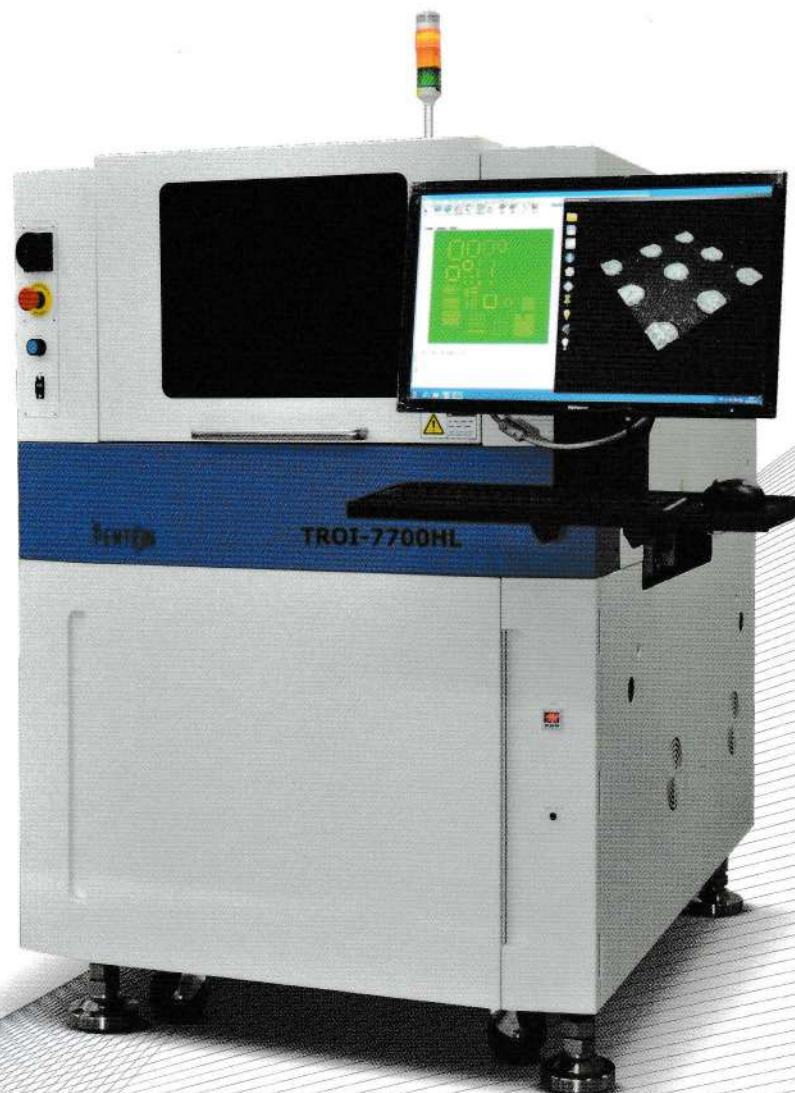


Color 3D SPI

TROI-7700H Series

3D Inline Solder Paste Inspection System



Technology and Features

Dual Projection

Combination of 2D & 3D inspection eliminates common shadow problem with SPI systems.

64 bit Windows 7 Operation System

Fast & Stable Operating System for high density PCB.

User Friendly Graphical Interface

Self-developed Gerber Editor controls the main functions on one page which means it's eliminating the effort of switching between multiple screens. It is also possible to register or edit the data quickly and easily by any users.

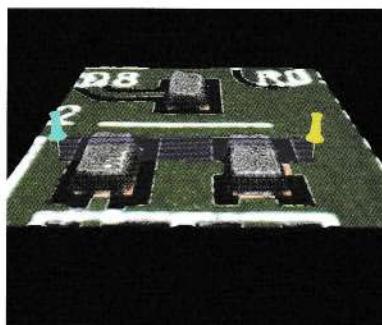
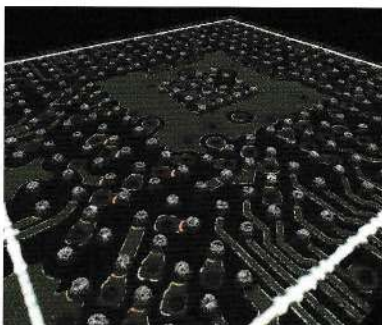
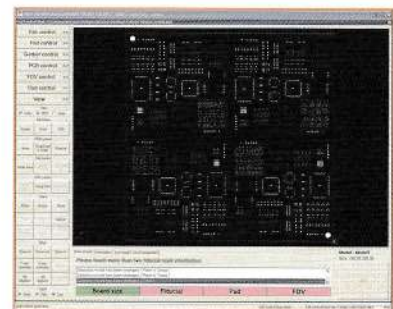
Color 3D SPI

Conventional SPI methods could only calculate heights above silk print levels, but by using patented color enhancing algorithm TROI™ could overcome these problems.

In addition, a fully rotational 3D view of the solder form is displayed. This enables users to view a "life like" image of the pad eliminating the need to extract the board from the line to view the defect under a microscope.

High Accuracy Linear Motor

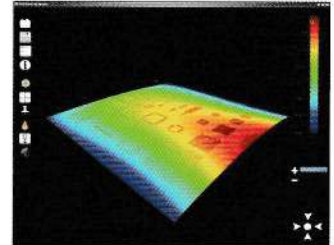
The use of Linear X and Y stages, TROI™ provides a high accuracy under $\pm 5\mu\text{m}$.



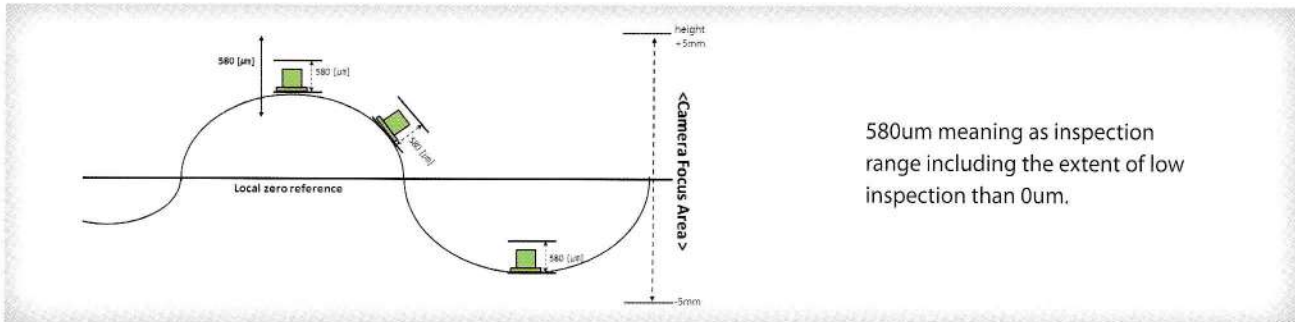
Warpage compensation

Wider range of reference point search area prevents less deviation of recognizing a zero reference point.

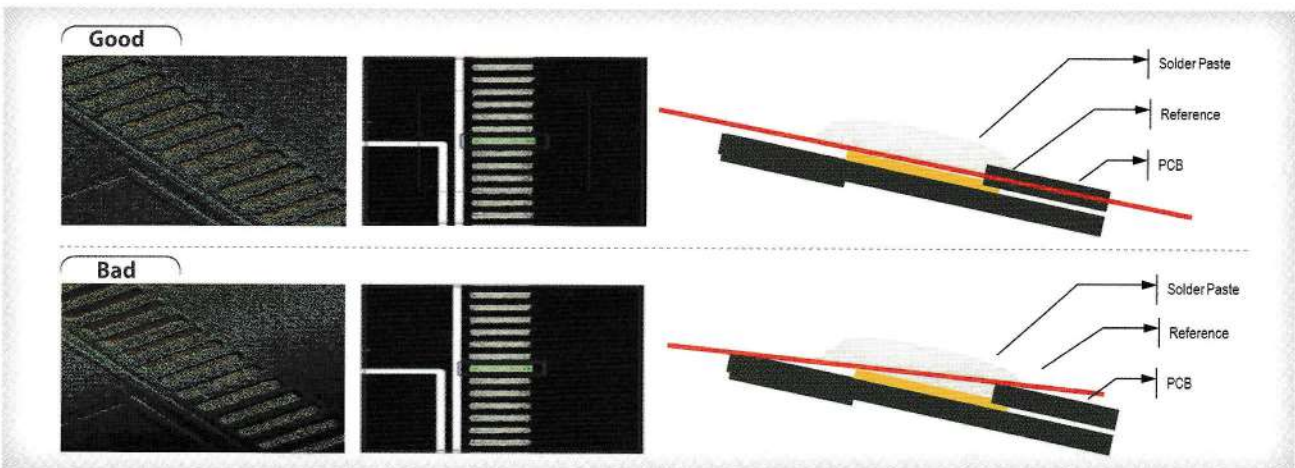
- Accurate height calculation
- Compare other pads within ROI
- Better repeatability



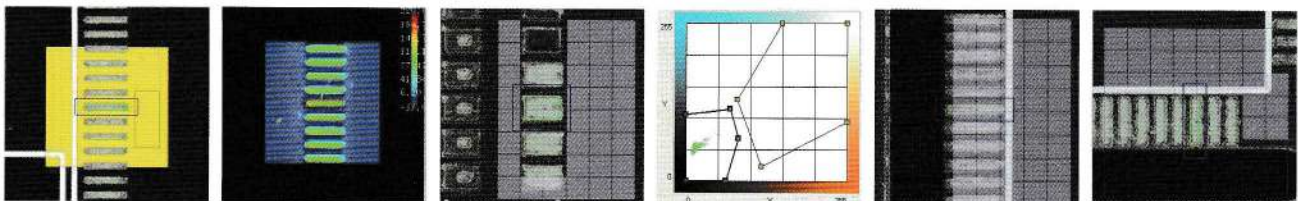
Inspection Sequence



580µm meaning as inspection range including the extent of low inspection than 0µm.

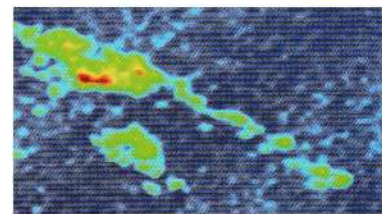
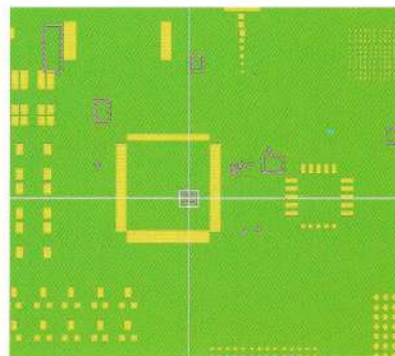


The exact floor measurement and automation capabilities



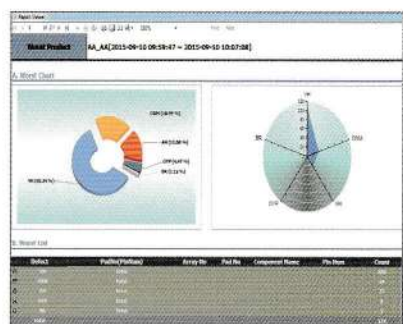
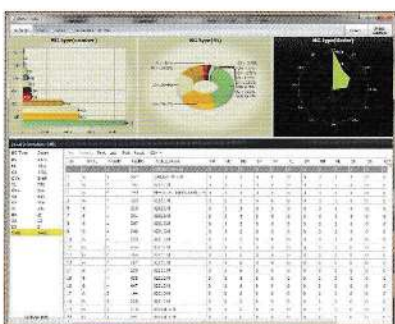
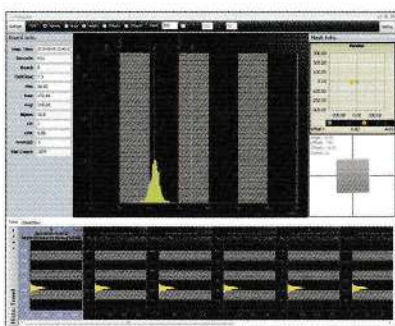
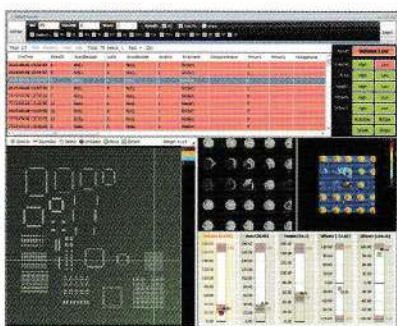
Foreign Object Inspection

Regardless of any PCB color, PEMTRON color X&Y is able to distinguish accurately between the foreign object and PCB



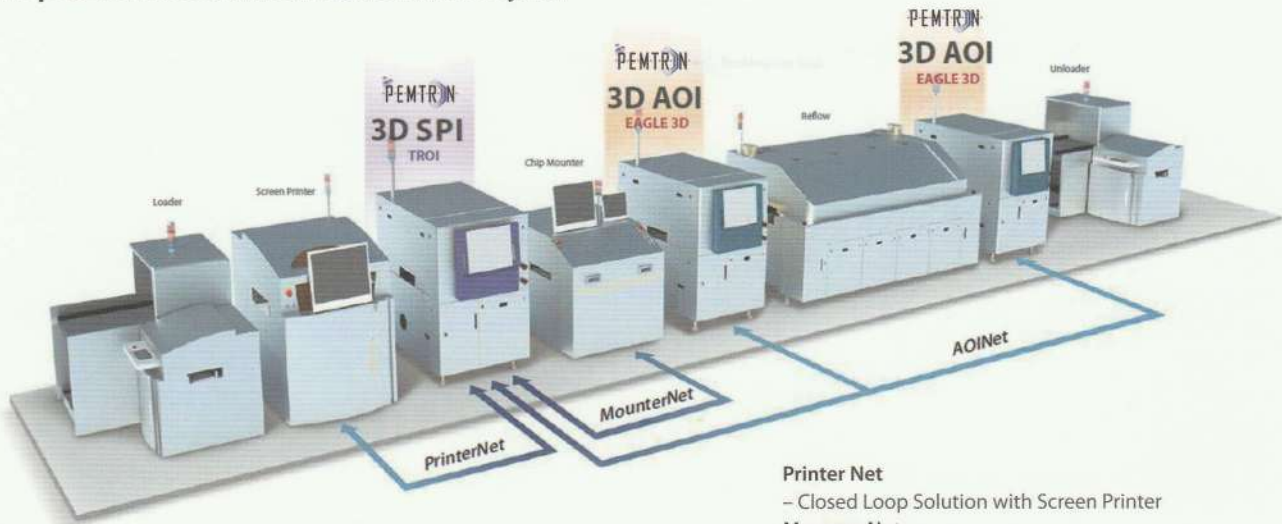
Enhanced SPC System

SPC system analyses the defective data and controls the process problems or the production rate at a look. SPC data can be saved in a various file format such as HTML, Excel, Image and etc as users like. Also with the enhanced SPC server function, data from multiple lanes can be controlled together or individually.



Real Time Process and Quality Control Solutions

Inspection Result Information Auto Sync.



Printer Net

- Closed Loop Solution with Screen Printer

Mounter Net

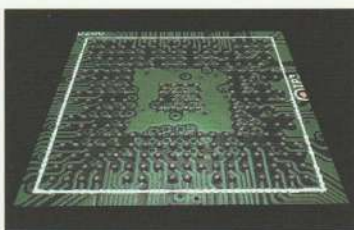
- Closed Loop Solution with Mounter

* Bad Mark Mounter Sync and Adaptive Process Control

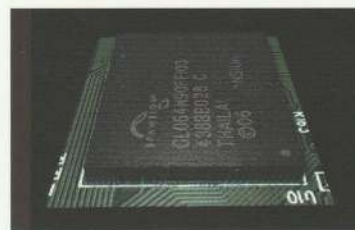
TROI SPI & EAGLE 3D AOI closed loop function

- Real time defect confirm

Printer
Auto Sync
Printing QC



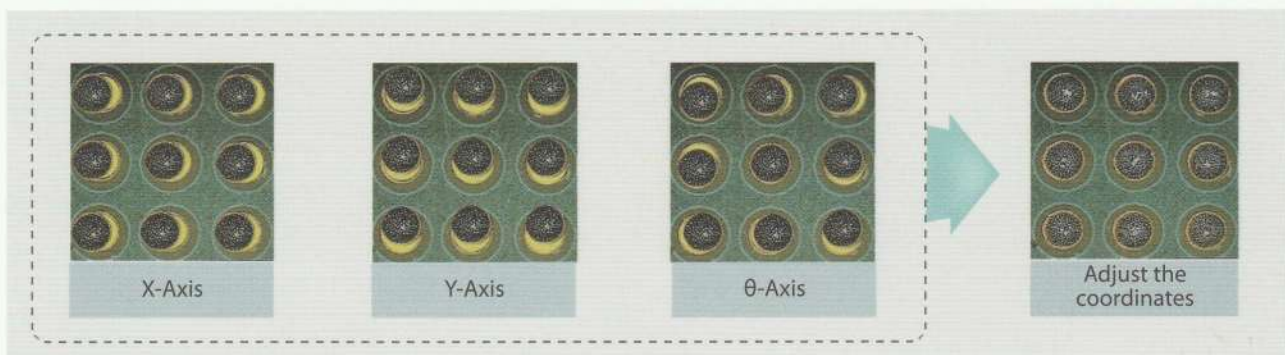
SPI Pad



AOI Part

Repair
Station
Production QC

Inspection Result Information Auto Sync.

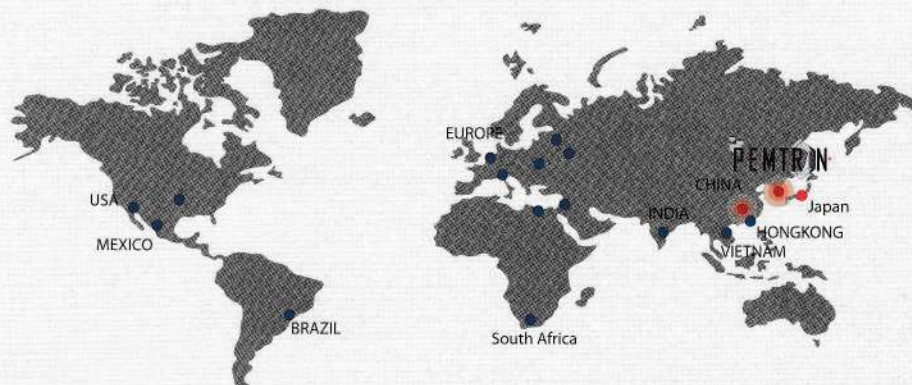


TROI™ Series (Solder Paste Inspection System)

SPECIFICATIONS

Model		TROI-7700H	TROI-7700HD		
2D/3D Vision Algorithm		2D : Vision Inspection Algorithm 3D : PMP (Phase Measuring Profilometry) Algorithm			
Measurements		Volume, Height, XY Position, Area			
Detection Types		Insufficient Paste, Excessive Paste, Shape Deformity No Paste, Bridge 2D&3D, Paste Displacement			
X/Y Pixel Resolution		12 μ m	15 μ m		
Inspection Speed		25.2 cm ² /sec	38.4 cm ² /sec		
FOV (Field of View)		24.5 x 24.5 mm	30.7 x 30.7 mm		
Height Range / Resolution		0 ~ 450 μ m / 0.4 μ m			
Height Repeatability		\pm 1% (3 σ)*			
Volume Repeatability		\pm 1% (3 σ)*			
Height Accuracy		2 μ m*			
Max. PCB Warp		\pm 5 mm			
Gage R&R		< 10%*			
Linear Motor Accuracy		\pm 3 μ m (Linear Motor)			
PCB Specification	Board Size	Standard Type (H / HD)	Min. 50x50mm (2x2inch) Max. 330x330mm (13x13inch)	Single Dual	Min. 50x50mm (2x2inch) Max. 330x500mm (13x20inch)
		Large Type (HL / HDL)	Min. 50x50mm (2x2inch) Max. 510x510mm (20x20inch)	Single Dual	Min. 50x50mm (2x2inch) Max. 510x600mm (20x24inch) Max. 510x330mm (20x13inch)
	PCB Thickness	0.4 – 7.0 mm			
	Bottom Clearance	27mm			
Electrical Requirements		200 – 240 VAC, 50/60 Hz			
Installation Requirement	Air Requirement		5 Kg ³ /cm ²		
	Power Consumption	Standard Type Large Type	3kW (14.0A Max @ 220V AC) 4.5kW (30.0A Max @ 220V AC)	6.5kW (23.0A Max @ 220V AC) 7kW (25.0A Max @ 220V AC)	
Control Unit	Control Method		PC Based Control (Windows 7, 64bit)		
	Monitor		24" LED Panel		
Operating	Operating Temperature		20 - 30 °C (68 – 86 °F)		
Machine Dimension	W x D X H / Weight	Standard Type	900 x 1200 x 1550mm(35 x 47 x 61 inch) / About 700kg (1543 lbs)	870 x 1650 x 1550mm(34 x 65 x 61 inch) / About 850kg (1873 lbs)	
		Large Type	1080 x 1370 x 1550mm(42 x 54 x 61 inch) / About 820kg (1764 lbs)	1120 x 1700 x 1550mm(44 x 67 x 61 inch) / About 900kg (1984 lbs)	
Options		Telecentric Lens / Barcode Reader (1D&2D) / Touch Panel / UPS (uninterrupted power supply) / Close Loop / Bad Mark Sync			

* Specifications subject to change without notice.



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