

COLOR 3D SPI *SATURN*

3D Inline Solder Paste Inspection System



SATURN Series

Technology and Features

Dual Projection (Option Quad(4) Projection-Semicon)

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

64 bit Windows 10 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 could only calculate height above silk print levels, but by using patented color enhancing algorithm SATURN could separate the copper, silk and solder paste then can calculate from copper to solder paste.

In additional , a fully rotational 3D view of the solder form is displayed. This enables users to view a life like image of the pad elimination 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

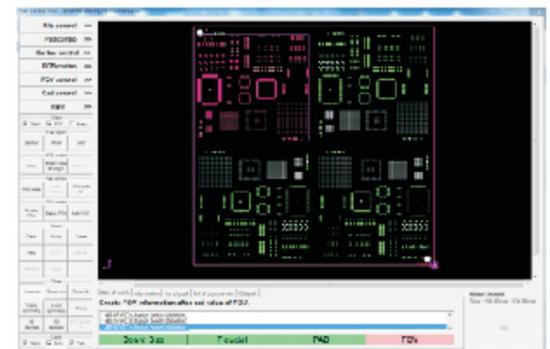
SATURN provides a high accuracy under $\pm 3\mu\text{m}$.

SPI Standard Library

Base on the experience of AOI, PEMTRON firstly import the standard library for SPI.

So can Link all the parameter in different programs be the same.

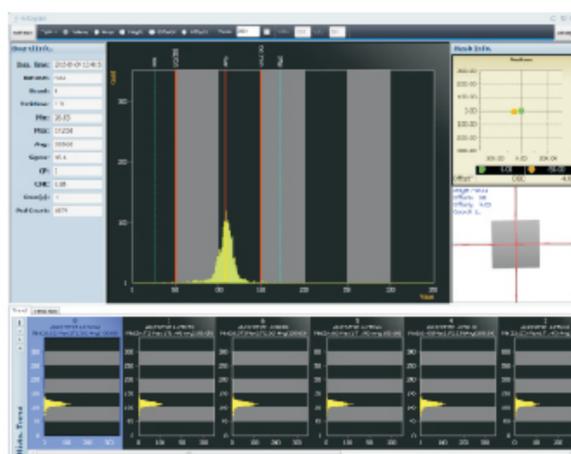
When create new program, just one step to finish parameter setting for all pad, reduced the programming time and enhance the accuracy of parameter setting.



SPI Standard Library

SPC system analysis 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 PDF, Excel, Image and etc as users needed.

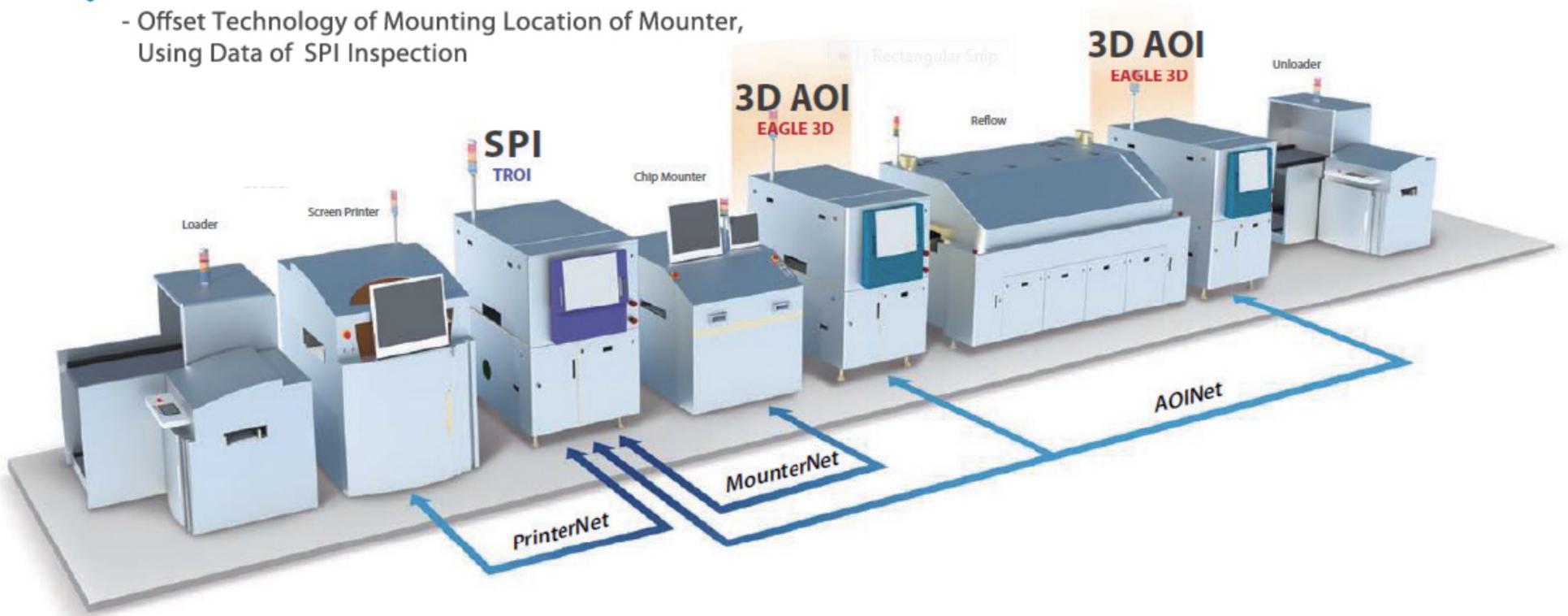
Also with the enhanced SPC server function, data from multiple lanes can be controlled together or individually.



Real Time Process and Quality Control Solutions

Inspection Result Information Auto Sync.

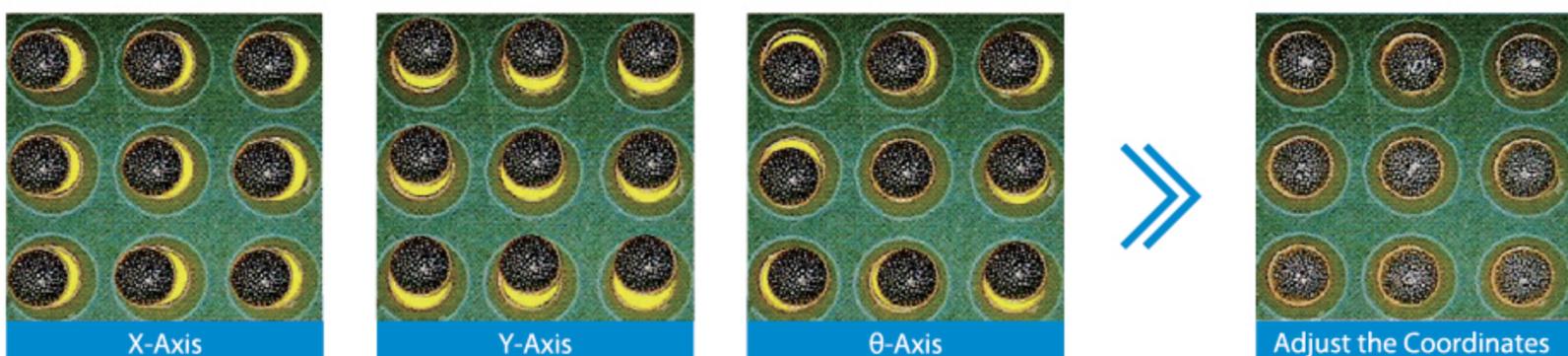
- ⬢ **Printer Net**
 - Closed Loop Solution with Screen Printer
- ⬢ **Mounter Net**
 - Closed Loop Solution with Mounter
 - Bad Mark Mounter Sync and Adaptive Process Control
- ⬢ **APC MFB**
 - Offset Technology of Mounting Location of Mounter, Using Data of SPI Inspection
- ⬢ **PEMTRON SPI & AOI Closed Loop Function**
 - Real time defect confirm
- ⬢ **SMARTRON**
 - Control a maximum of twelve on one monitor



SPI & AOI Linkage



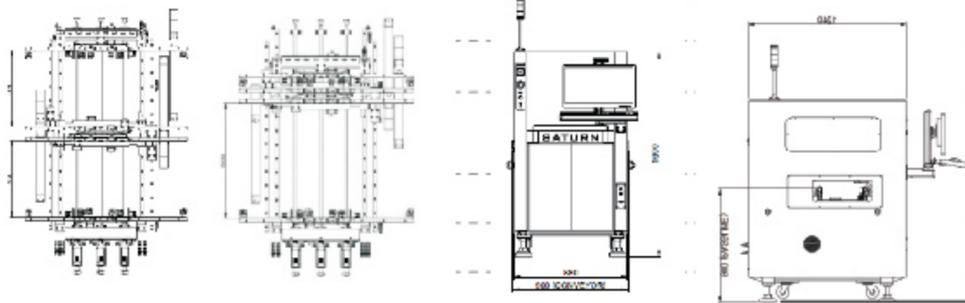
Inspection Result Information Auto Sync.



SATURN Series

SPECIFICATIONS

Configuration	Standard Version			High Speed Version			Pro Version
Camera	4MP			10MP			12MP
X/Y PixelResolution	10um	15um	18um	10um	15um	18um	15um
Inpection Speed	15cm ² /Sec	35cm ² /Sec	49cm ² /Sec	38.4cm ² /Sec	86.4cm ² /Sec	123cm ² /Sec	108cm ² /Sec
FOV (Field Of View)	20X20 mm	30X30 mm	36X36 mm	33X30 mm	48X45 mm	57X54 mm	45X60 mm
Model	SATURN		SATURN L	SATURN D		SATURN DL	
2D Vision Algorithm	2D : Vision Inspection Algorithm						
3D Vision 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						
Max. PCB Size	330 X 330mm		510 X510mm		Dual : 330 X 280mm Single :330 X 500mm		Dual : 510 X330mm Single : 510X 600mm
Min. PCB Size	50X50mm						
Dimension/Weight	900*1200*1550mm 700kg		1080*1370*1550mm 800kg		870*1650*1550mm 850kg		1120*1700*1550mm 900kg
Electrical Requirements	220 ~ 240 Vac , 1 Phase, 50/60Hz						
Power Consumption	2.1 KW(9.68 A Max)		2.3 KW(10.9 A Max)		2.3 KW(11 A Max)		2.6 KW(11.65 A Max)
Thickness	0.4 ~ 7.0 mm						
Bottom Clearance	27 mm						
Height Range / Resolution	0 ~ 450 um / 0.4 um						
Height Accuacy	1 um						
Max PCB Warpage	+/- 5 mm						
Motor Type	XY Linear Servo Motor						
Control Units	PC(I7-8700 , 1TB+500G, 16G memory)/Monitor(24 inches)						
Option	<ul style="list-style-type: none"> • Offline Editor • 3D Target (KTL) • NG Buffer 	<ul style="list-style-type: none"> • i-PEMTRON Closed Loop • 2D Glass Board JIG • NG Conveyor 	<ul style="list-style-type: none"> • SMARTRON • Bottom Side Barcode • UPS 	<ul style="list-style-type: none"> • 3 Stage Conveyor • Extention Conveyor 			
Special Size Requirement	SATURN XL		SATURN UXL		SATURN YXL		SATURN ZXL
Max.PCB Size	690*650mm		850*650mm		1200*650mm		1500*650mm



* Specifications subject to change without notice.



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