

# EAGLE 3D 8800 Series

3D Automated Optical Inspection system



## Technology and Features

### Advanced High Speed Inspection and Measurement Technology

#### Shadowless Phase Measuring Profilometry

EAGLES 4MP 8 Projector 3D AOI inspects 100% of the PCB in 2D and 3D. Combining the 2 technologies gives a complete optical inspection of a PCB shadow free and low false calls maintaining a high flexibility in system functionality.

#### Moiré Technology



Over 10 years of integrating Phase Measuring Profilometry Technology into our TROI Solder Paste Inspection Systems has proven the most advanced 3D technology available.

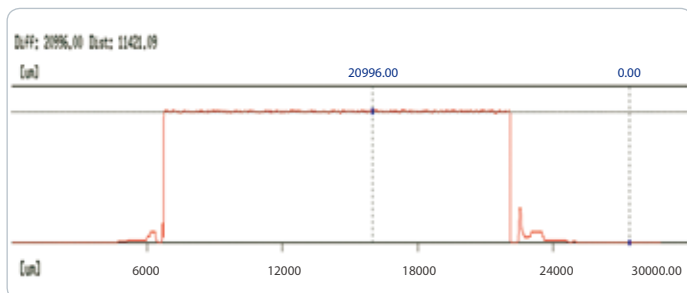
- 8 Projection + Three stage lighting
- 2D and 3D simultaneous inspection algorithms
- Telecentric Lens offers higher accuracy and detection
- High Speed CPU and Image Processing
- User Friendly Graphical Interface
- Built in Library Management System
- Offline Real Time Debug Station (Optional)

#### High Speed Inspection Technology

EAGLES High Speed Option inspects in 40.5cm sq. per sec. by utilizing an advanced network of more robust CPU, controller boards and our proprietary developed 9MP 15um 150fps camera with telecentric lens.

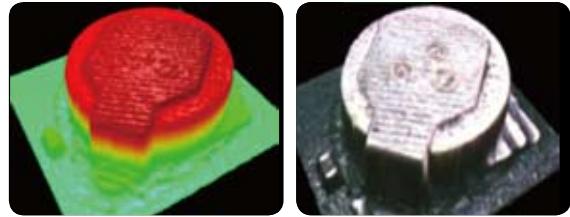
#### High Component Inspection Technology

EAGLES optional new 10-Way Projection Technology offers an industry first 27mm component height inspection in 100% 3D.



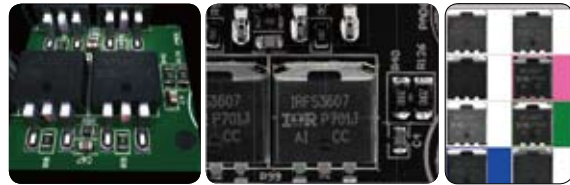
## Shadow Free 3D Technology

Eliminates shadow issues on highly populated PCBs and tall components



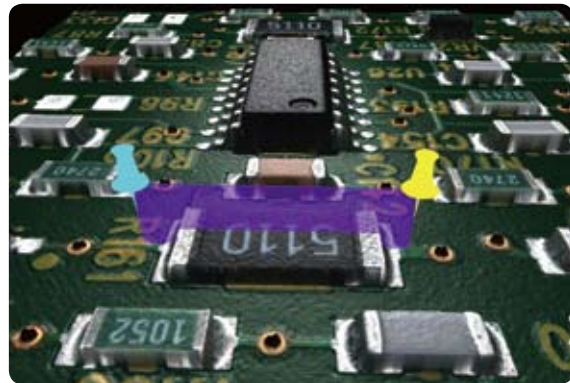
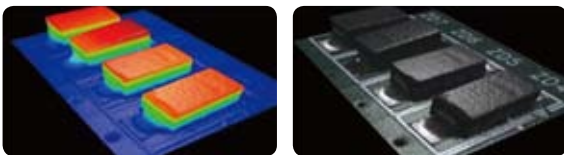
## Optical Character Recognition

Recognizes component part characters by using color and pattern algorithms. Ability to add & modify OCR font to optimize inspection condition.



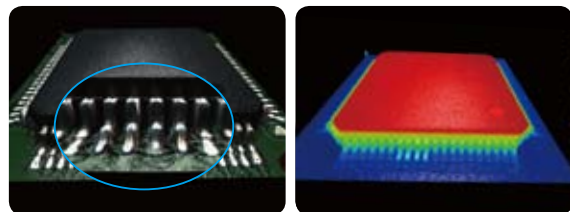
## 3D Solder & Height Measurement

Using our advanced 3D technology, the EAGLE is able to take inspection to levels that are limited by conventional 2D systems. Adding solder height, volume and part co-planarity inspection provides enhanced defect detection capabilities.



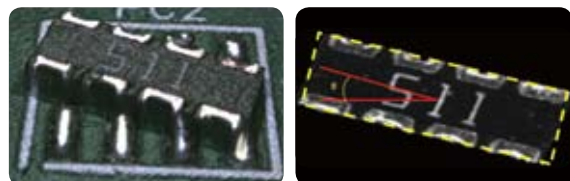
## 3D Lead Inspection

3D measurement algorithms enable the EAGLE to measure lead height and volume of solder proving full-high quality 3D images.

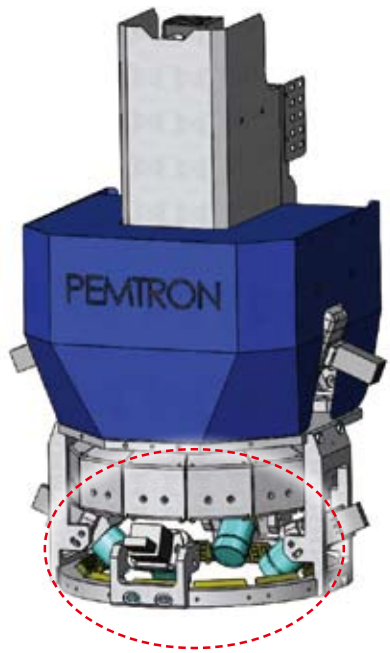
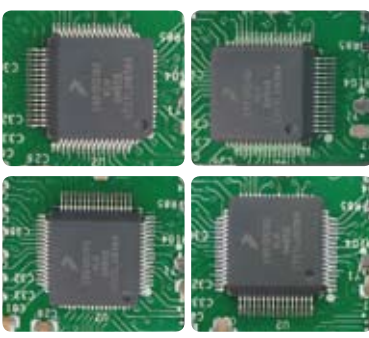
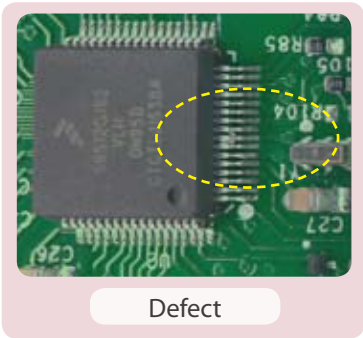
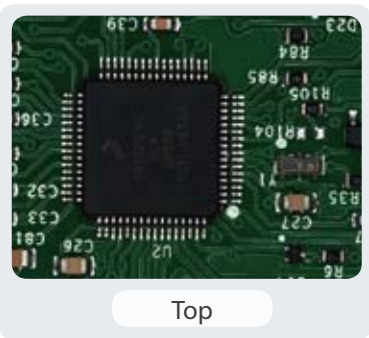
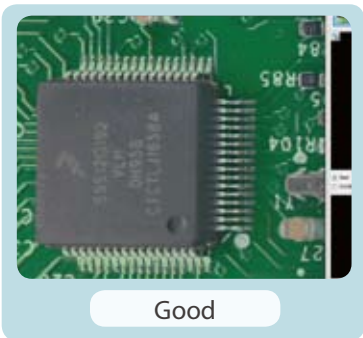


## Tilt & Rotate Measurement

Advanced algorithms can extract, detect and differentiate diverse component body patterns automatically.



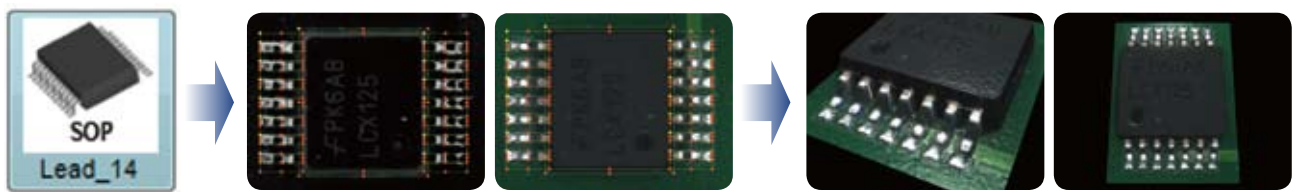
## An accurate and convenient Inspection by using Side Camera



- 4-Way Side Camera (Option)
- Possible to detect inside bridge which it cannot detect with Top camera
- Possible to detect Connector inside area
- Convenient Teaching by using existing Algorithm.
- Real time inspection algorithm for Side Camera

### Ease of programming (Auto Teach Function)

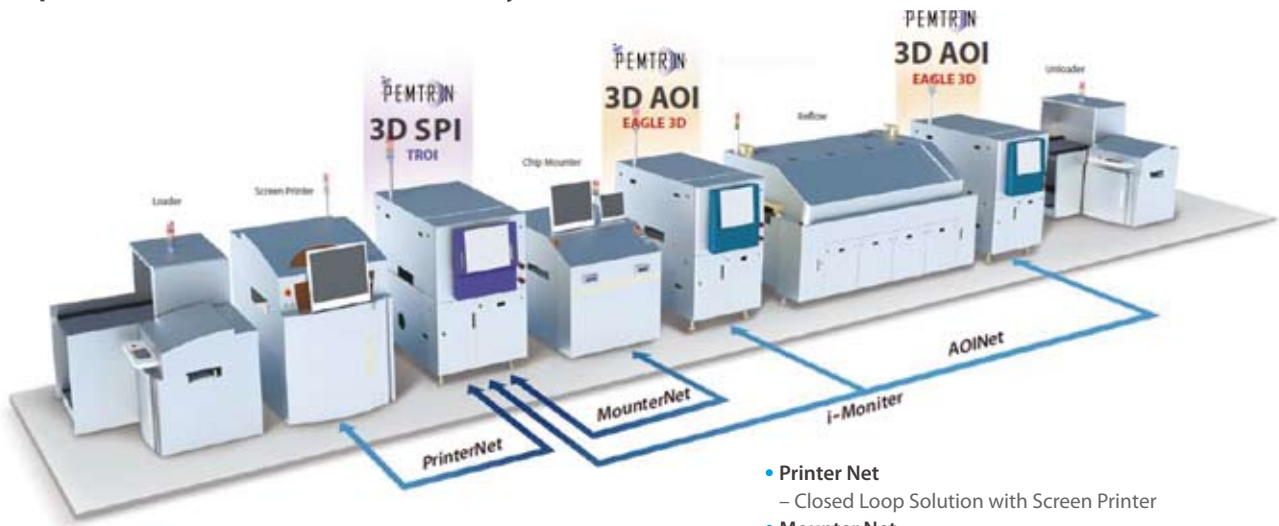
Advanced 3D imaging technology allows us to measure and recognize the geometric shapes of PCB components and automatically link them to our built in parts library.





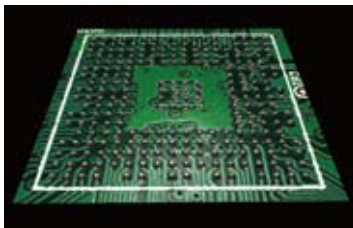
# Real Time Process and Quality Control Solutions

## Inspection Result Information Auto Sync.

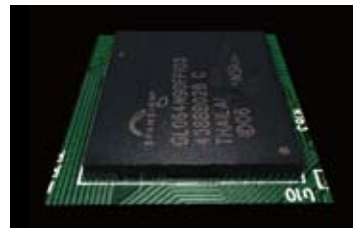


- **Printer Net**  
– Closed Loop Solution with Screen Printer
- **Mounter Net**  
– Closed Loop Solution with Mounter  
\* Bad Mark Mounter Sync and Adaptive Process Control
- **TROI SPI & EAGLE 3D AOI closed loop function**  
– Real time defect confirm
- **i-Monitor**  
– Control a maximum of twelve on one monitor

TROI SPI  
Auto Sync  
Printing QC



SPI Pad



AOI Part

EAGLE AOI  
Repair  
Station  
Assembly QC

## Statistical Process Control



SMT LINE 1

SMT LINE 2

SMT LINE 3

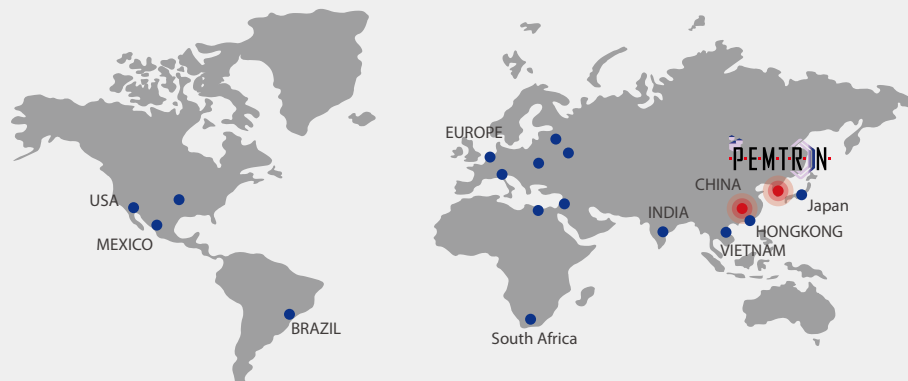
- Pemtrons SPC module collects and analyses the inspection data, calculates and displays the data at a glance. A robust SQL driven database lends the user the flexibility of sorting and exporting the desired production results in a multitude of ways.
- The optional SPC Server collects data from multiple inspection systems over SMT lines, all in one system and interface.

# EAGLE 3D 8800 Series

## SPECIFICATIONS

Model		EAGLE 3D - 8800			EAGLE 3D – 8800HS			EAGLE 3D – 8800PRO
Camera		4MP			9MP			12MP
X/Y Pixel Resolution		10um	15um	18 um	10um	15um	18um	15um
Inspect Speed		9.1 cm <sup>2</sup> / sec	20.5 cm <sup>2</sup> / sec	29.5 cm <sup>2</sup> / sec	18 cm <sup>2</sup> / sec	40.5 cm <sup>2</sup> / sec	58.3 cm <sup>2</sup> / sec	52.65 cm <sup>2</sup> / sec
FOV (Field Of View)		20 x 20mm	30 x 30mm	36 x 36mm	30 x 30mm	45 x 45mm	54 x 54mm	45 x 60mm
Height Range		0 – 5.5mm (option 27mm)						
Height Accuracy		± 3%						
Max. PCB Warpage		± 3mm						
Motor Type		XY Linear Servo Motor						
PCB Specification	Inspection Size	Standard	Min. 50 x 50mm (2 x 2 inch) Max. 330 x 330mm (13 x 13 inch)					
		Large	Min. 50 x 50mm (2 x 2 inch) Max. 510 x 510mm (20 x 20 inch)					
	Thickness	0.4 ~ 7.0mm						
	Top Clearance	50mm						
	Bottom Clearance	50mm						
Electrical requirements		220 ~ 240Vac, 1Phase, 50/60Hz						
Power Consumption		3.5KW (16.0A Max @ 220 AC)						
Machine Dimension	W x D X H / Weight (Standard)	1010x1190x1600mm (40 x 47 x 63inch) / About 750kg (1653lb)						
	W x D X H / Weight (Large Type)	1190x1370x1600mm (47 x 54 x 63inch) / About 970kg (2143lb)						

\* Specifications subject to change without notice.



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