KY8030 NOVA

The Best Value 3D Solder Pasted Inspection Solution

Delivering an ideal mix of cost and performance, the KY8030 Nova provides the best value for a varied set of application needs demanding enhanced product quality, increased productivity, and improved operational efficiency.

Warp Compensation

SPC

KSMART

Koh Young Technology
INTELLIGENT INSPECTION

True 3D Smart Factory Solutions, Powered by AI

KY8030 NOVA

Best-in-class Measurement Accuracy and Inspection Reliability

- Koh Young's inspection systems have become the industry standard. The KY8030 Nova features a pioneering True 3D Moiré by eliminating shadow and specular reflection challenges without compromising accuracy.



Camera
Projection Light
Projection Light
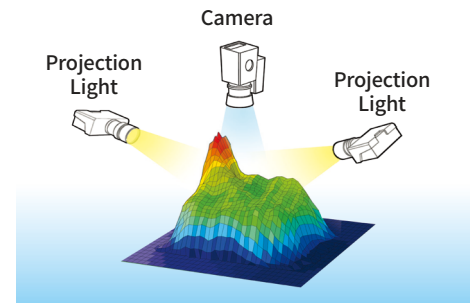
Unmatched Inspection Speed with Guaranteed Best Accuracy

- The KY8030 Nova blends Koh Young's pioneering technologies with an inspection speed of 50cm²/sec. The combination of this system's throughput and accuracy makes the KY8030 Nova suitable across a vast range of applications. The latest options makes this system twice as fast as our KY8080 with guaranteed measurement accuracy.

15um
50cm²/sec

2x Faster!

15um
23cm²/sec

KY8030 NOVA   KY8080
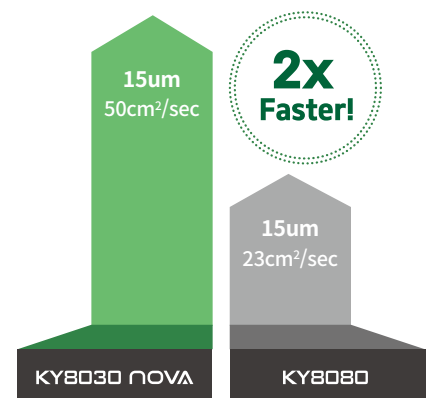
### Robust Real-time Active Warp Compensation

- Achieve unparalleled accuracy with KY's real-time automatic referencing technology. Using advanced 3D imaging and algorithms, it accounts for factors such as tilt, stretch, twist, bow and shrinkage. This system dynamically adapts to non-linear inspection challenges using automatic reference teaching. It compares PCB pad locations to the ideal stencil design from the CAD file. You can rely on precise compensation for optimal inspection performance every time.

PCB Warp 3D Display

Before Warp Compentation   After Warp Compensation
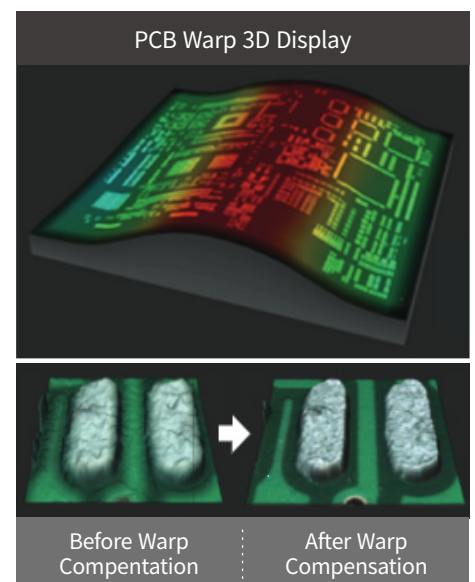
Merging Value with Performance

- Combining Koh Young's Optomechatronics expertise with advanced vision algorithms and leading inspection technologies, the KY8030 Nova delivers high performance while keeping costs low, reducing the total cost of ownership (TCO).

Durability

Low Maintenance Costs

Low Downtime Costs

Low Operation Costs

High Performance with Low TCO
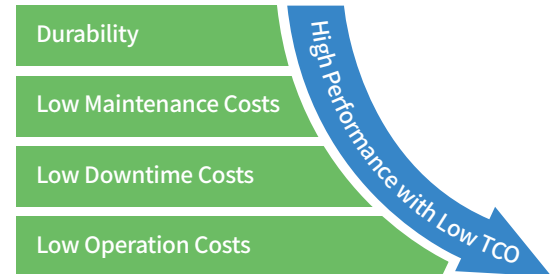
SPC-based Process Improvements

- Koh Young provides a state-of-the-art SPC toolkit used widely throughout the industry. The comprehensive SPC Plus allows users to easily understand their production process with the following features: histograms, X-bar & R-chart, X-bar & S-chart, Cp & CpK, % of Gage R&R. Data can be viewed in real-time and in a multiple display format. The software even generates automatic reports from a remote computer. The KY8030 Nova allows customers to improve their production quality while reducing operating costs to increase manufacturing visibility.
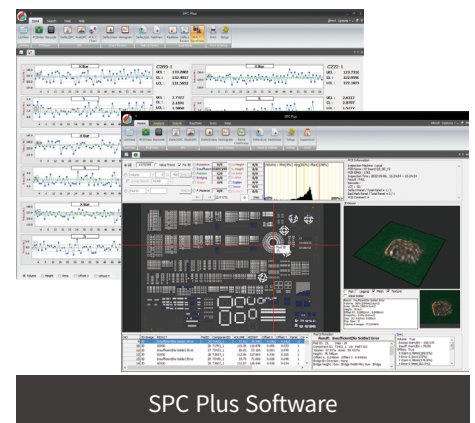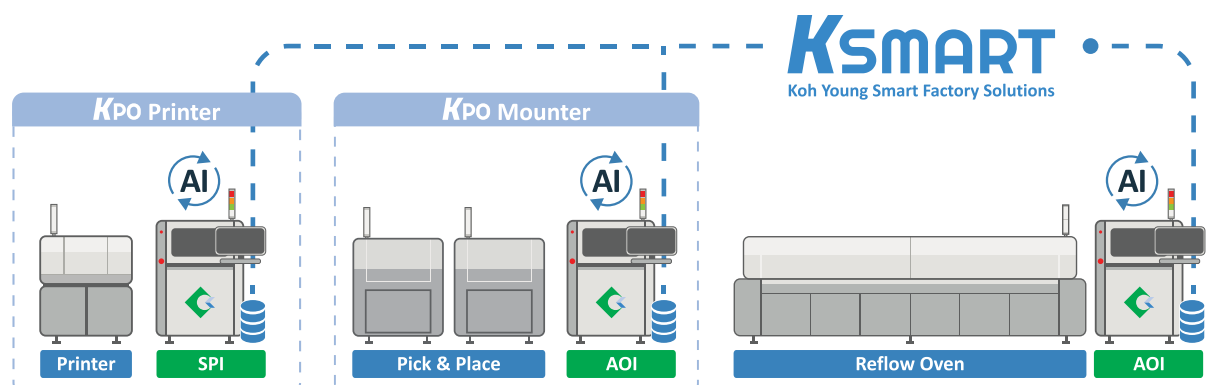
SPC Plus Software

The Gateway to a Smart Factory

- Maximizing production efficiency by combining industry standards with AI engines to go beyond simple machine connectivity and open the gates to a smart factory to everyone.

KSMART
Koh Young Smart Factory Solutions

KPO Printer

AI

Printer | SPI

KPO Mounter

AI

Pick & Place | AOI

AI

Reflow Oven | AOI

Must-Check Requirements of a 3D SPI System

Requirements	Solutions
Solution to shadow problem	3D shadow free moiré technology & dual projection
Real-time PCB warp compensation (2D + 3D solution)	Active warp compensation (Z-tracking & pad-referencing)
User-friendly operation	Renewal GUI, real color 3D image
Whole-board Foreign Material Inspection (WFMI)	3D foreign material inspection (Optional)

Inspection Task

Metrology Capability	Volume, area, height, offset, bridging, shape deformity, paste offset, coplanarity
Type of Defects	Insufficient, excessive, missing paste, bridging, shape deformity, paste offset, coplanarity

Inspection Performance

Model	Camera	Pixel Resolution	Full Speed Inspection Speed	Min. Distance between Pads	Max. Inspection Height
KY8030 Nova	9 Mpix	15 µm	50 cm²/sec (0.35 sec/FOV)	150 µm	600 µm~1 mm (23.6 mils~39.3 mils)
		10 µm	25 cm²/sec (0.31 sec/FOV)	100 µm	

Illumination	IR-RGB LED Dome Styled Illumination (Optional)
Z-Resolution	0.37 µm / 0.01 mils
Height Accuracy (on KY calibration target)	1 µm / 0.04 mils
0201mm Inspection Capability	Gage R&R < 10 % at 6 Sigma (± 50 % Tolerance)
Max. Inspection Size	< FOV
Multi-Colored PCB Inspection	Possible

Software

|	
Supported Input Format	GERBER Data (274X, 274D), ODB++ (Optional)
Programming Software	ePM-SPI (Optional)
Statistical Process Control Tool	SPC Plus (Histogram, X-bar & R-Chart, X-bar & S-Chart, Cp & Cpk, % Gage R&R / Real Time SPC & Multiple Display / SPC Alarm / Automatic Report from Remote Computer)
User-Friendly Features	Library Manager (Optional), KYCAL (Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration)
Operating System	WINDOWS 10 IoT ENTERPRISE LTSC 2019

Add-On Solutions

- 1D & 2D Handy Barcode Reader
- 1D & 2D Inline Barcode Reader
- Camera Barcode Reader
- UPS (Uninterruptible Power Supply)
- Review Station
- Offline Programming Station

- Offline Programming S/W Pro
- ODB++
- SPC Plus for Remote Computer
- KSMART Solutions
  (Monitoring & Analysis, Remote Access, Offline Program Optimizer, Link Data Analysis, Notification)

- Closed Loop Interface
- IPC-CFX Interface
- Fuji Nexim Interface
- Panasonic APC Interface (FF/FB)
- Panasonic iLNB Interface

The above specifications are subject to change without prior notice.

PCB Handling & Installation Requirements

Conveyor	Width Adjustment	Automatic	
	Fix type	Front / Rear fixed (Factory setting)	
Type		L	
		Single Lane	Dual Lane
Max. PCB Size (X x Y)		490 x 510 mm (19.2 x 20.0 in)	Single mode: 490 x 580 mm (19.2 x 22.8 in) / Dual mode: 490 x 320 mm (19.2 x 12.5 in)
Min. PCB Size		50 x 50 mm (1.9 x 1.9 in)	
PCB Thickness		0.4 ~ 4.0 mm (0.01 ~ 0.15 in)	
Max. PCB Weight		3 kg (6.6 lbs)	
Machine Weight		600 kg (1322.7 lbs)	700 kg (1543.2 lbs)
Clearance	Top	50 mm (1.96 in)	
	Bottom	50 mm (1.96 in)	
Electrical Supply		220VAC, 1Phase, 50/60Hz	
W		1,000 mm (39.3 in)	
D		1,295 mm (50.9 in)	1,475 mm (58.1 in)
H		1,621 mm (63.8 in)	

The above specifications are subject to change without prior notice.
* Please contact us for more information about PCB Sizes.
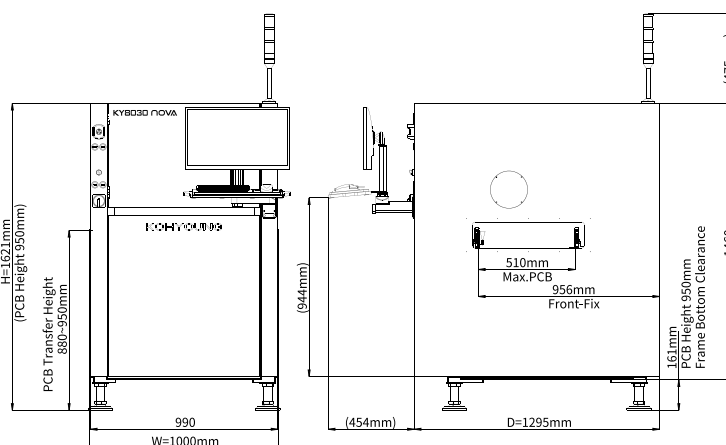
Koh Young Technology Inc.

14th Floor, Halla Sigma Valley, 53 Gasandigital 2-ro, Geumcheon-gu, Seoul, 08588, Korea

T +82.2.6343.6000   F +82.2.6343.6001   E kohyoung@kohyoung.com