

AIS Coating-HW

Inline PCBA Double-sided Coating Inspection Equipment



01
Intelligent and Efficient Programm

AI automatically identifies irregular programming efficiency coating areas to improve

02
Multi-scenario Bubble Detection

Use AI algorithms to ensure higher bubble detection rates with intuitive results

03
High-precision thickness measurement

Support single point thickness and whole board thickness detection

SPECIFICATION

Category	Item	AIS501-C-HW
Board Info	Dimension	Belt and chain track:50* 50mm-510* 460mm (Large board mode supports 730* 460mm) Roller track: 50* 50mm-430* 460mm (Large board mode supports 730* 460mm)
	Thickness	0.5mm-6mm
	Height Clearance	750mm/900mm
	Max weight	Chain ≤ 10KG
	Max Component Height	Top: 75mm, Bottom: 50mm
	Edge Clearance	3mm
Vision Module	Camera & Light Source	5MP color high speed camera & UV+W, UV+RGBW(optional)
	Resolution & FOV	5MP: 52mm* 44mm/ 12MP: 60mm* 45mm(optional)
	Inspection Speed	0.23sec/FOV
Inspection	Coating Inspection	Less coating, more coating, bubble, splashing, foreign matters, glue width, glue thickness(Option)
	Algorithm	AI Algorithm mainly: AI polygon, AI coating, AI bubble, AI foreign matters and bilateral distance detection algorithm
	Component Inspection(Option)	Insertion Components and SMD: Wrong part, missing part, polarity, XY offset, angle offset and damage, etc.
	Solder Inspection(Option)	Excessive solder, insufficient solder, bridging, colde solder, solder hole, solder balls, no pins and bent pin, etc.
Programming	Multiple Inspection Scenarios	Mixed board inspection, multi-panel inspection, mixed material detection, large board mode detection (optional)
	Programming Method	Auto-generates the coated polygon area, auto-configures the coating detection algorithm, and adjusts the parameters
	In-line on fly programming and finetuning	Feature allow users perform programming , components changes or parameters updates without stop or distract the active production line.
Other Features	Barcode Identification	1D / 2D barcode & QR code identification(5* 5mm above)
Hardware	Industrial Computer	CPU: intel i5 Graphics: Nvidia GTX1050Ti Memory: 64G DDR4 Storage: 256G SSD+2T HDD Network: 1000M network card
	Display	23.8 inch
	Operating System	Ubuntu 18.04 LTS 64bit
	Communication	Standard SMEMA interface
	Width Adjustment	Manual/automatic
	Motion Structure	High precision screw + servo motor
	Dimension and Weight	(L* H* W)1080*1629*1336mm (750mm Height Clearance. Tower light excluded), 1000Kg (L* H* W) 1080* 1684* 1336mm (900mm Height Clearance. Tower light excluded), 1200Kg
	Power Supply and Power	AC 220V. Rate power 500W
	Air	0.4-0.6Mpa
	Environmental Requirements	Temperature: 10~45°C. Humidity: 30~85%RH



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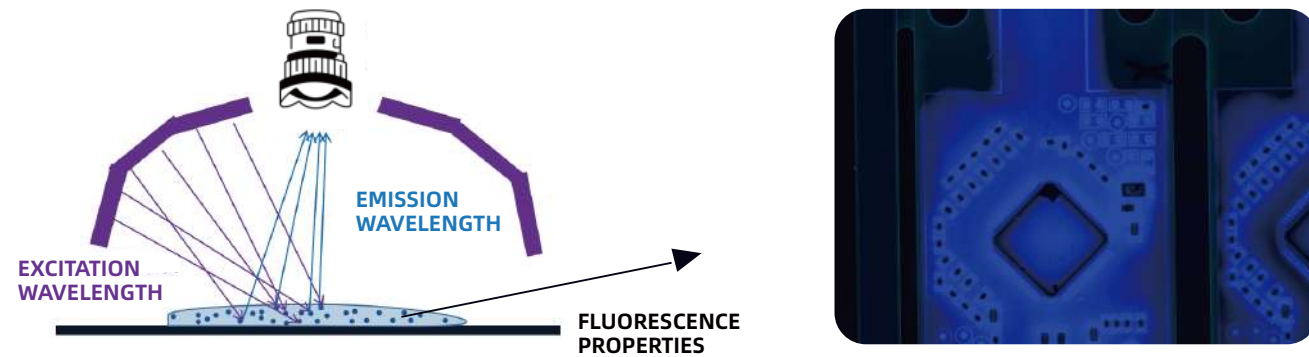


YouTube

CORE ADVANTAGES

High-brightness UV light source to clearly reproduce coating images

High-brightness UV light source improves anti-interference ability, optimize glue imaging uniformity and consistency, truly restore the coating glue adhesion. Ensuring detection stability and accuracy

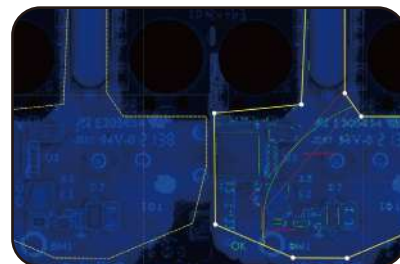


AI deep learning algorithm. Intelligently identify coating defects

Built-in algorithm for polygon recognition and detections of bubble, scattered point/foreign matters and others. Auto- identify the coating area, auto-configure the algorithm and judge defects. Non-require human debugging.



White Bubbles of 100um or Less



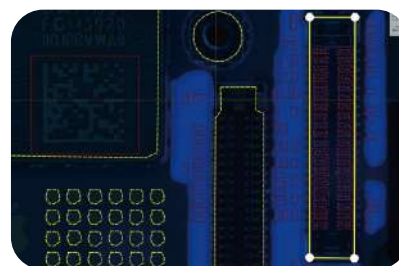
Foreign Matters Detection



Orange Peel Detection

AI Simplified Programming. Auto-Identify Coating A

AI deep learning polygon algorithm realizes auto-programming for whole-board. One-key identifies the coating area and frame automatically, while generates the same-shape detection frame, effectively dealing with irregular distribution of irregular coating fluids. Fast programming.



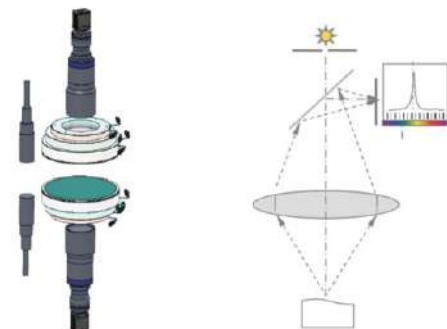
Polygon Programming



Bubble Group Detection

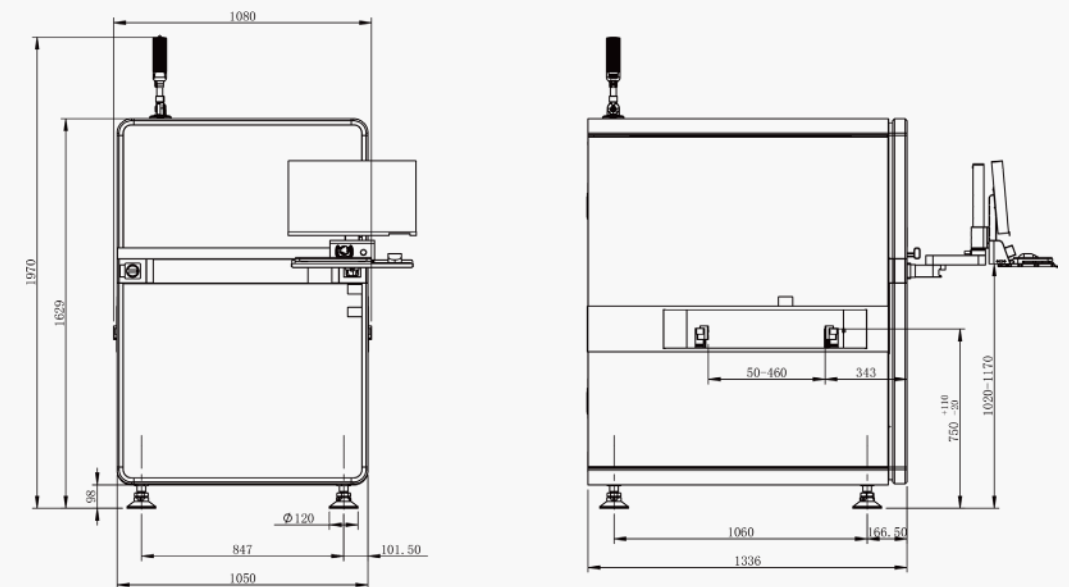
Data Visualization of Glue Thickness (optional)

The point spectrum confocal thickness measurement solution is adopted to infer the thickness of the coating glue by analyzing the changes in the fluorescence signal intensity at different depths. It is non-contact and will not damage the coating. It has higher resolution and can capture subtle thickness changes. The thickness measurement accuracy is within 10um, and the coating quality can be monitored in real time.



ARCHITECTURE DRAWING

AIS501-C



Unit: mm

APPLICATION SCENARIO

Before or After Curving Oven



INSPECTABLE DEFECTS

