

AIS Coating-HW

Inline PCBA Coating Inspection Equipment



SPECIFICATION

| Category | Item | AIS401-C-HW |
|----------------|---|---|
| Board Info | Dimension | 50* 50mm-510* 460mm (Large board mode 710* 460mm) |
| | Thickness | 0.5mm-6mm |
| | Height Clearance | 900mm |
| | Max weight | Belt ≤ 3KG / Chain ≤ 10kg |
| | Max Component Height | Top: 35mm, Bottom: 80mm (Can be customized to 80) |
| Vision Module | Camera & Light Source | 5MP color high speed camera & UV+W, UV+RGBW(optional) |
| | Resolution & FOV | 5MP: 36mm* 30mm/ 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 |
| Other Features | 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. |
| | Barcode Identification | 1D / 2D barcode & QR code identification(5* 5mm above) |
| | Industrial Computer | CPU: intel i5 Graphics: Nvidia GTX1050Ti Memory: 32G DDR4 Storage: 256G SSD+2T HDD Network: 1000M network card |
| | Display | 23.8 inch |
| | Operating System | Ubuntu 18.04 LTS 64bit |
| Hardware | Communication | Standard SMEMA interface |
| | Width Adjustment | Manual/automatic |
| | Motion Structure | High precision screw + servo motor |
| | Dimension and Weight | (L*H*W) 1015*1541*1166mm (Tower light excluded), 728Kg |
| | Power Supply and Power | AC 220V. Rate power 380W |
| | Air | 0.4-0.6Mpa |
| | Environmental Requirements | Temperature: 10~45°C. Humidity: 30~85%RH |

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

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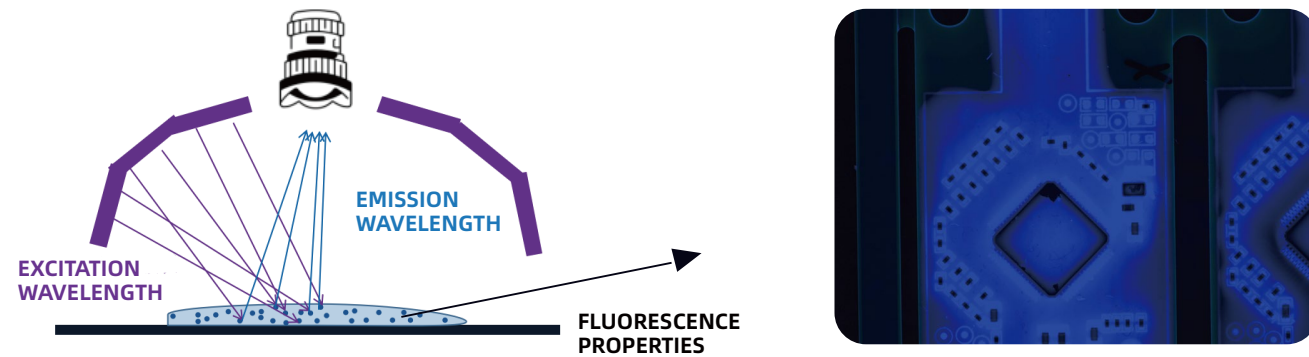


YouTube

● CORE ADVANTAGES

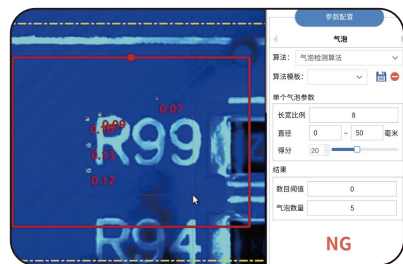
High-brightness UV light source to clearly reproduce coating images

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

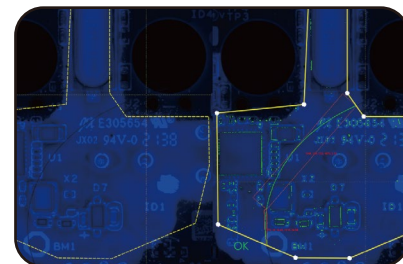


AI deep learning algorithm. Intelligently identify coating defects

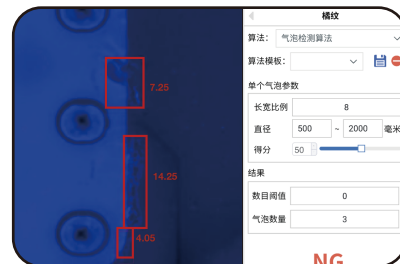
Built-in algorithm for polygon recognition and detections of bubble, scattered point/foreign matters and others. Auto- identify the coating area, auto-configure the algorithm and judge defects. Non-require human debugging.



White Bubbles of 100um or Less



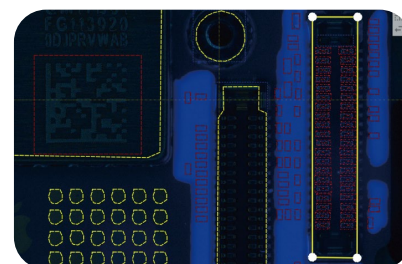
Foreign Matters Detection



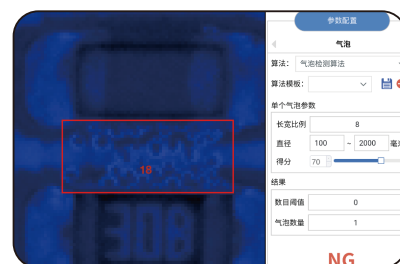
Orange Peel Detection

AI Simplified Programming. Auto-Identify Coating Area

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.



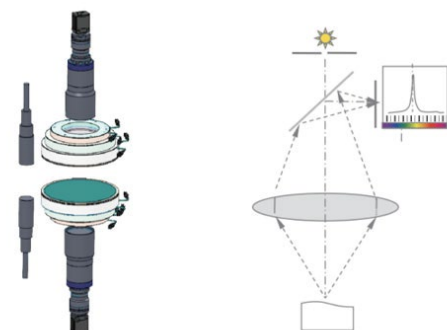
Polygon Programming



Bubble Group Detection

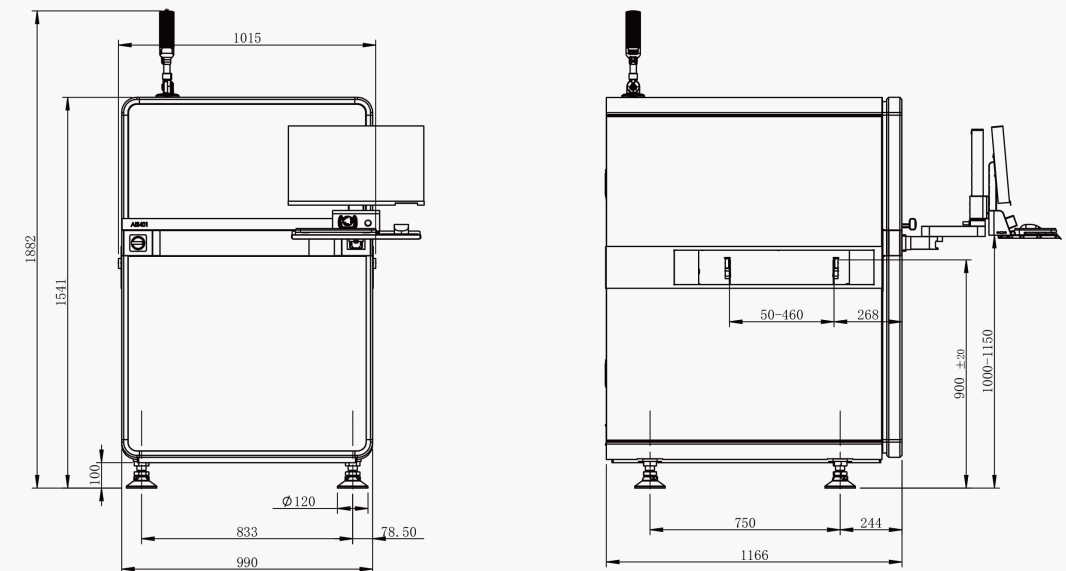
Data Visualization of Glue Thickness (optional)

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

AIS401-C



Unit: mm

● APPLICATION SCENARIO

Before or After Curving Oven



● INSPECTABLE DEFECTS

More Coating Less Coating Foreign Material Glue Width Splashing Thickness Bubble

