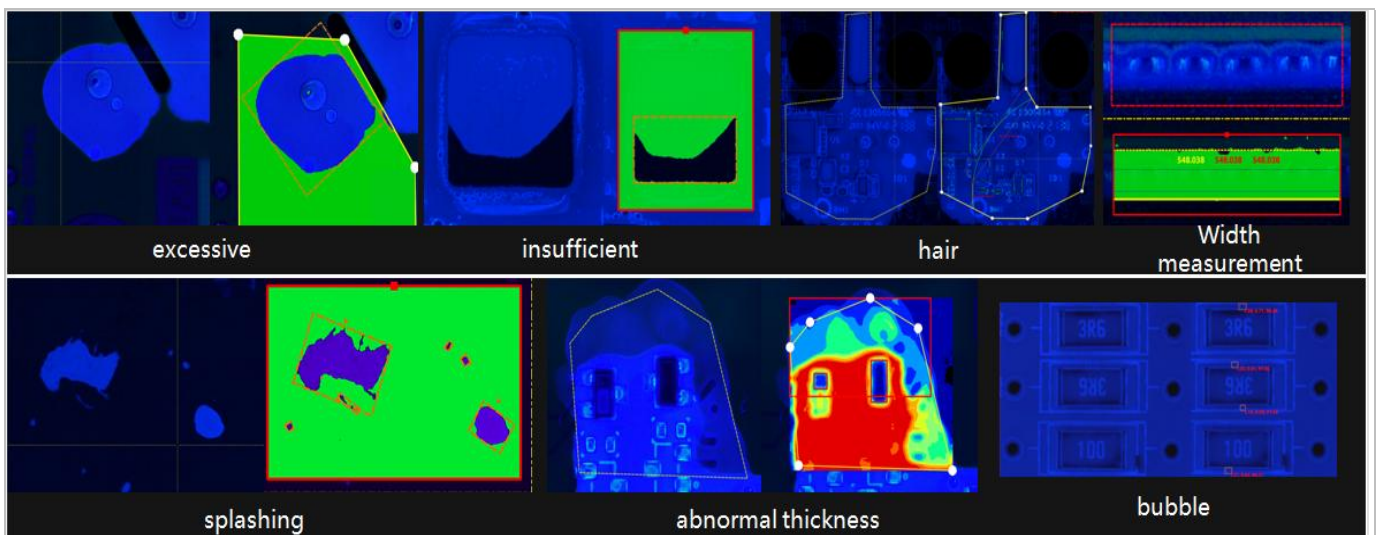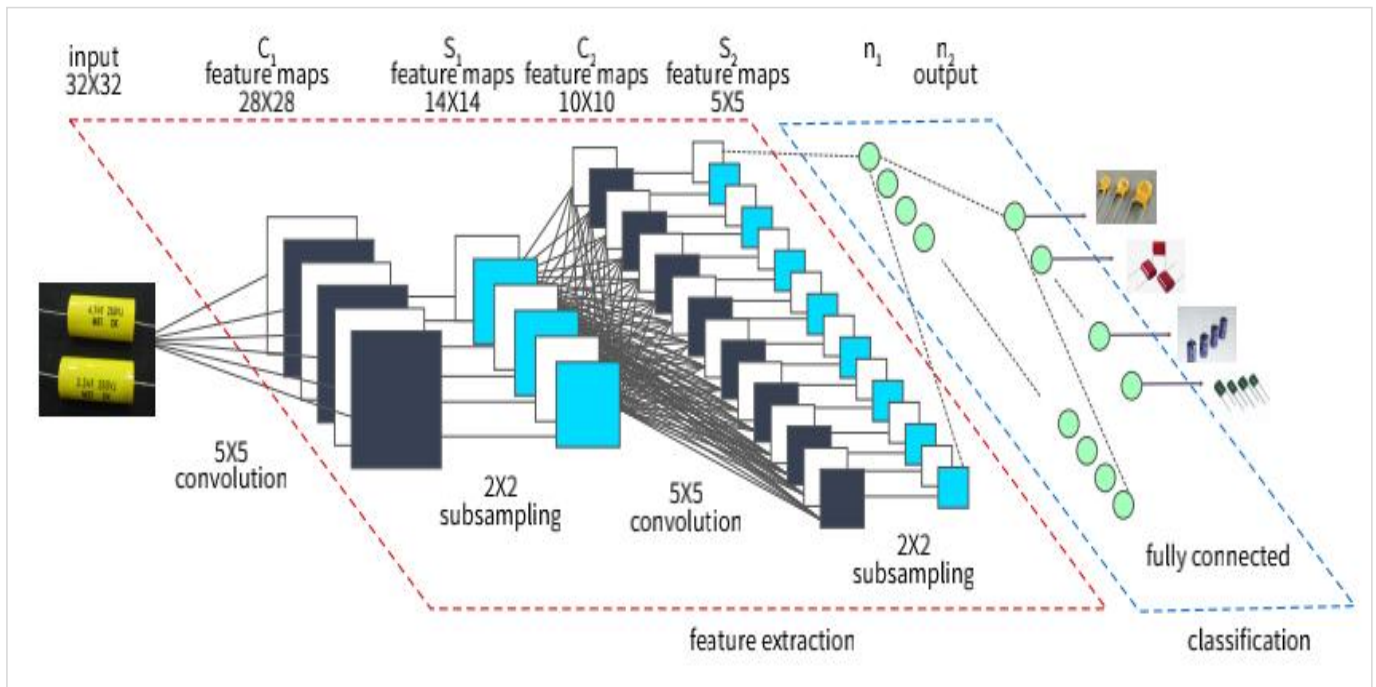## I.C.T Coating Online AOI AI-5146C

I.C.T Coating Online AOI AI-5146C for conformal coating inspection, captures board image in real time by high precision color industrial camera. Adopt Convolution Neural Network (CNN) algorithm to process images. Judge defects of components intelligently.

Features:

1. Online AOI for conformal coating inspection.

2. Intelligently lock coating border. Automatically identify coating area.

3. Able to coating defects. DIP defects, SMT defects, soldering defects and other defects can be application after switching light source.

4. Support multi-in-1 panel and mixed model inspection.

5. Simplified programming flow, very simple interface. Support batch modifying parameters with one-key.

6. Centralized control. Interconnection between multiple equipment.

7. Real-time inspection without stopping the board.

8. Apply UV light source, the glue containing phosphorus can clearly distinguish.

9. Multiple configurations (whole board, double side) are available.

10. Intelligently judge bubble of targeted area,Minimum bubble diameter is up to 0.05mm.

11. Data is traceable. Support SPC alarm, LOG automatic collecting and storage function, NG warning/alarm function, Remote programming&debugging.

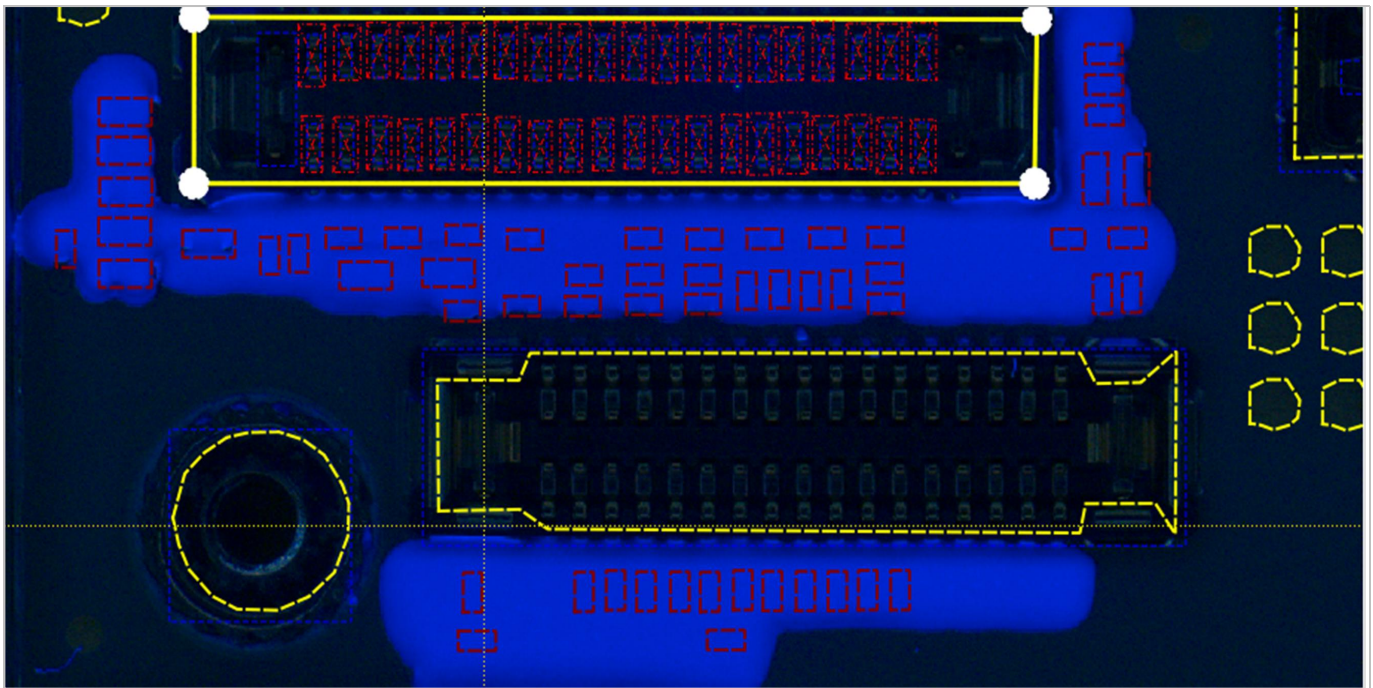12. UV glue thickness measurement function optional.

Advantage:

Deep Learning Algorithm

I.C.T AOI by applying deep learning algorithm, big data optimization and intelligent minimalist programming in industrial inspection, I.C.T enables intelligent judgment by one-click automatic identification of components and solder joints, thus addressing the two major pain points of traditional algorithms, namely, long programming time and high false alarm rate.
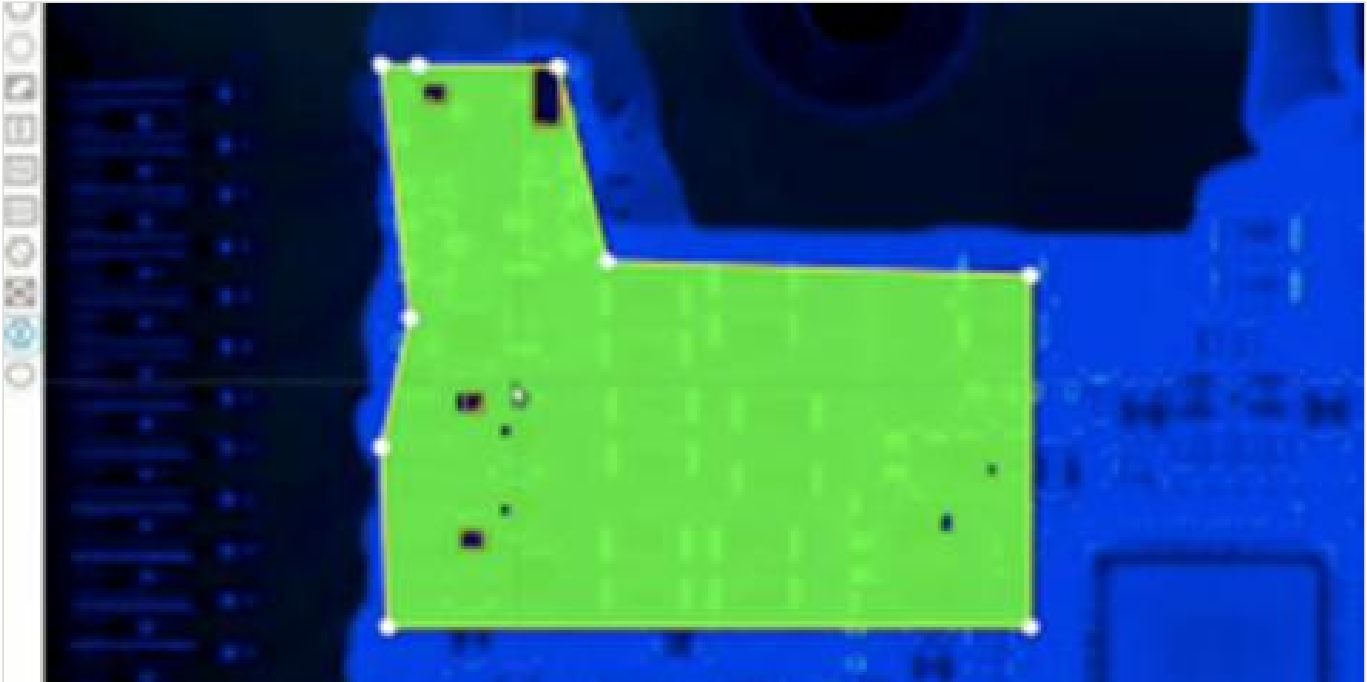

Flexible procedures

1. Intelligently lock coating border and automatically identify coating area makes programming speed fast.

2. Intelligent algorithm, Automatically identify coating area and generate ion checkbox of the same shape.

3. Flexibly select, ion area of any shape can be select. Only need to set coating or not.

4. Offline programming. Support offline programming. Convenient for modification and debugging.
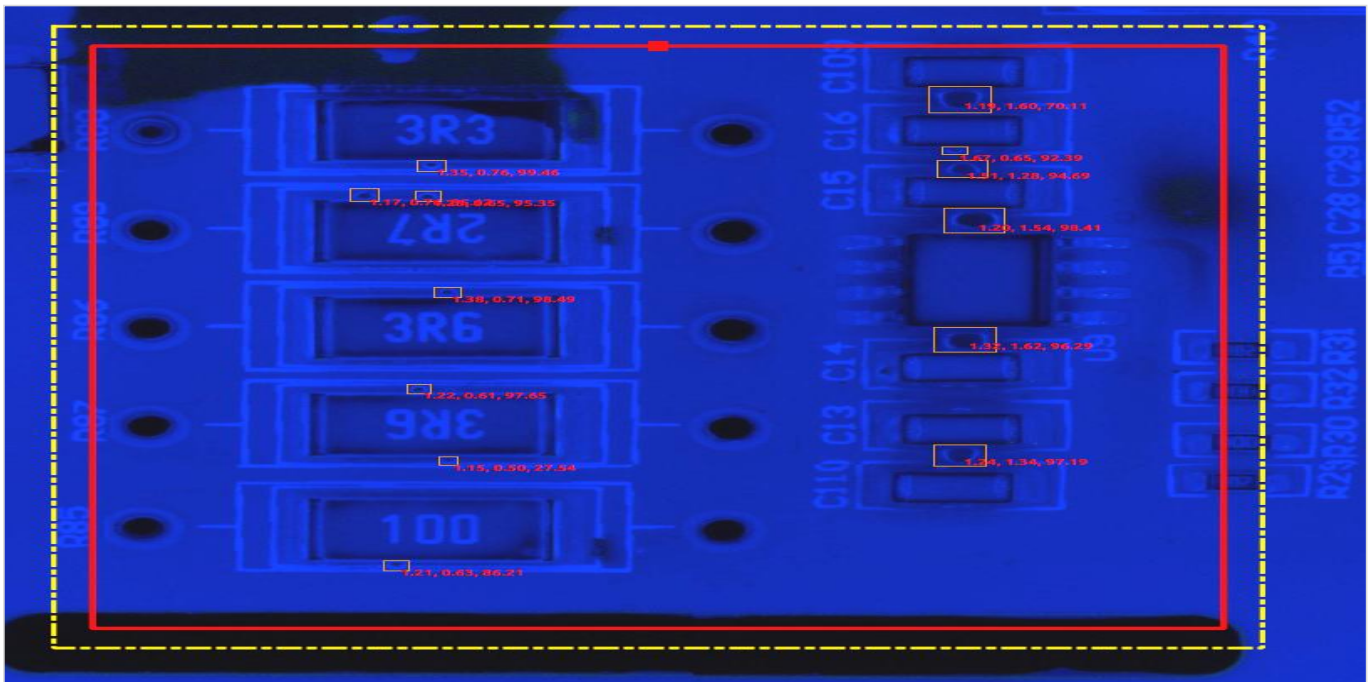
5. Online programming. Files of existing formats can be called directly without repeated adjustment.

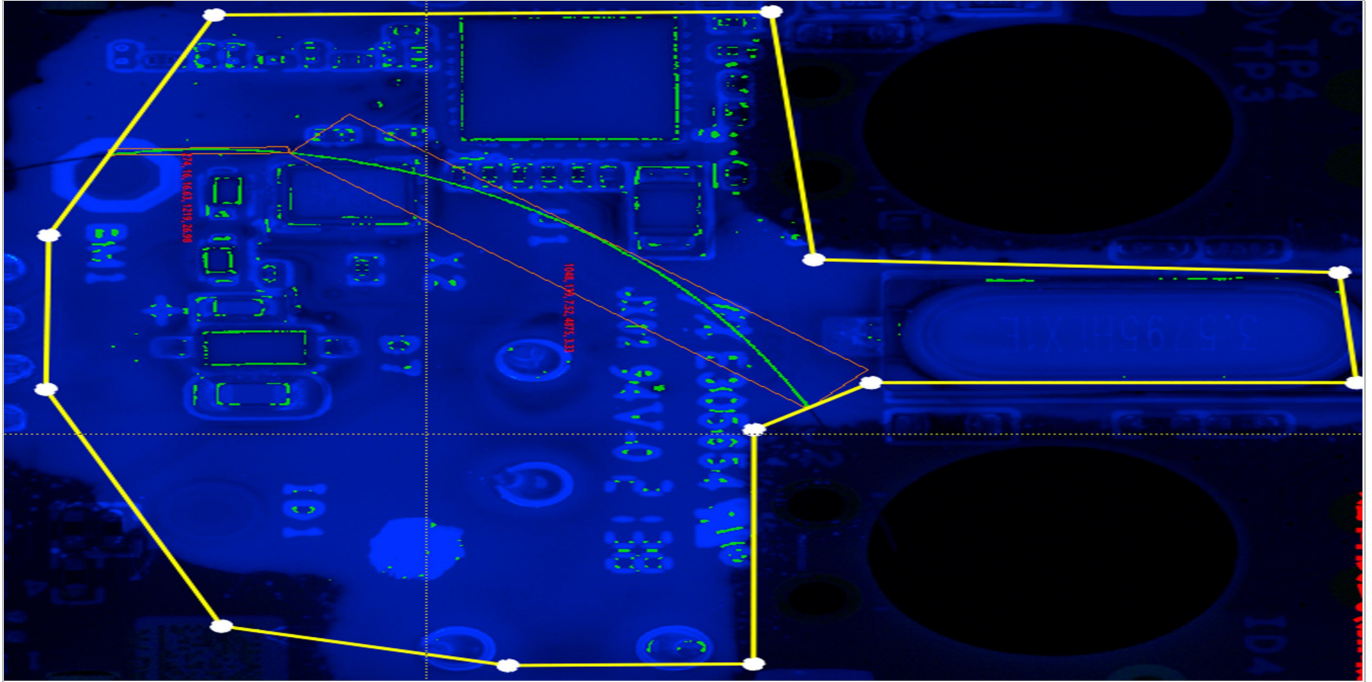6. Easily operate. Programming time only needs 10-15min.

Non-coating area block

When there are individual non-coating points in the frame selection area, they can be framed and shielded by a variety of shape frames to ensure the detection accuracy and avoid the workload of re-judgment caused by false positives.
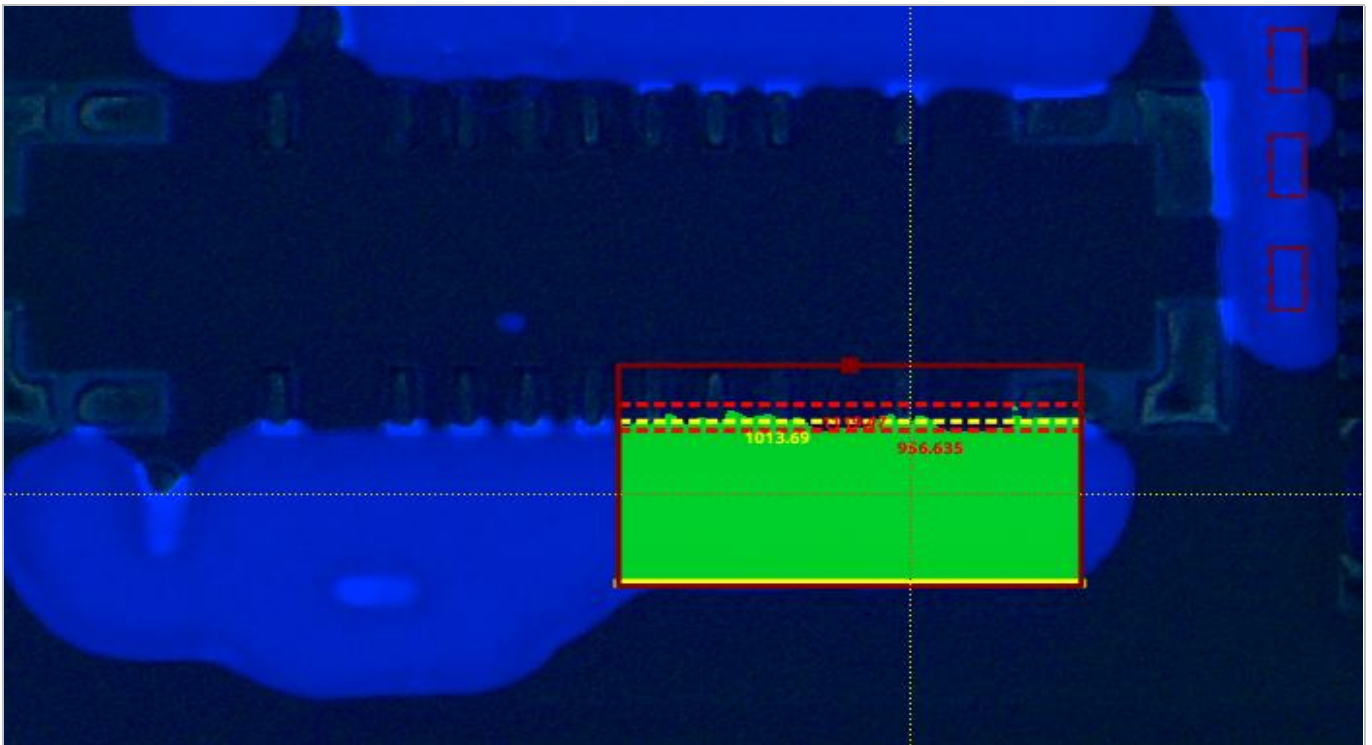

Bubbles inspection

Automatically identify bubble defects in the area to be tested, and visualize the bubble value.
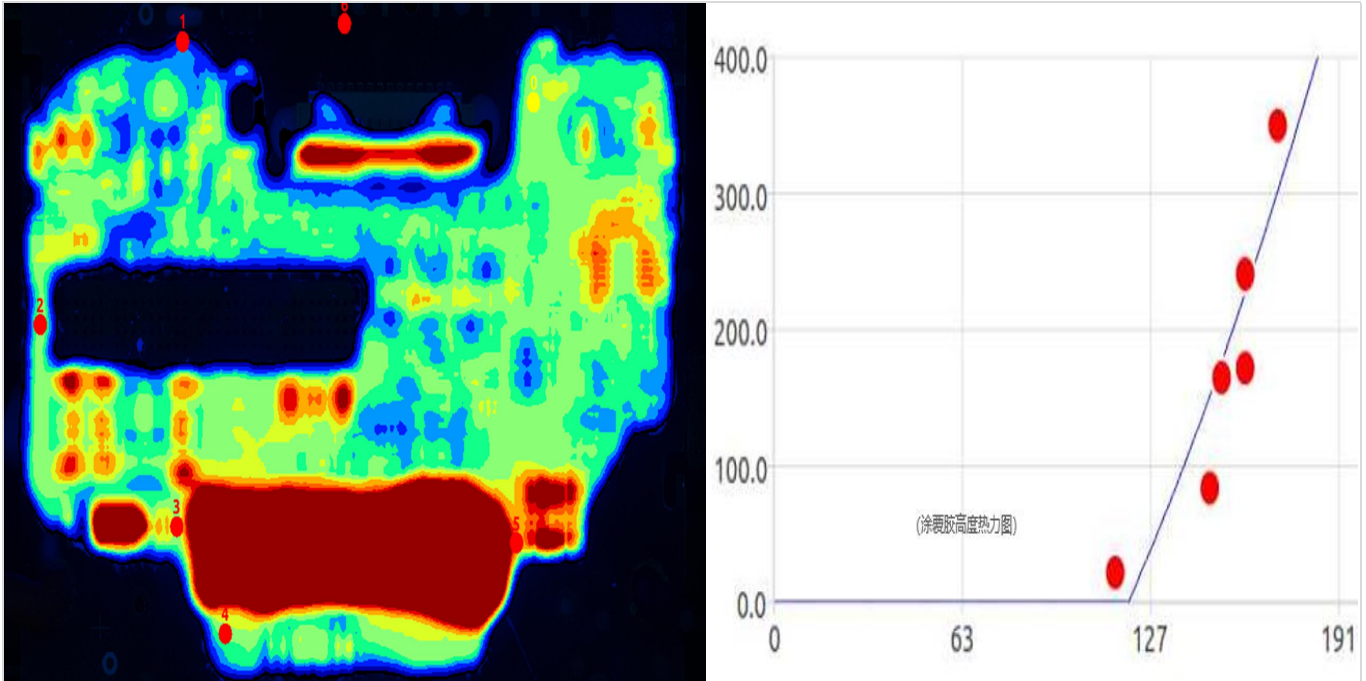
Scatter/Foreign Object Inspection

Dedicated scatter foreign object detection algorithm, intelligently identify scattered points or foreign objects (such as hair strands) in the area to be measured, without personnel debugging.
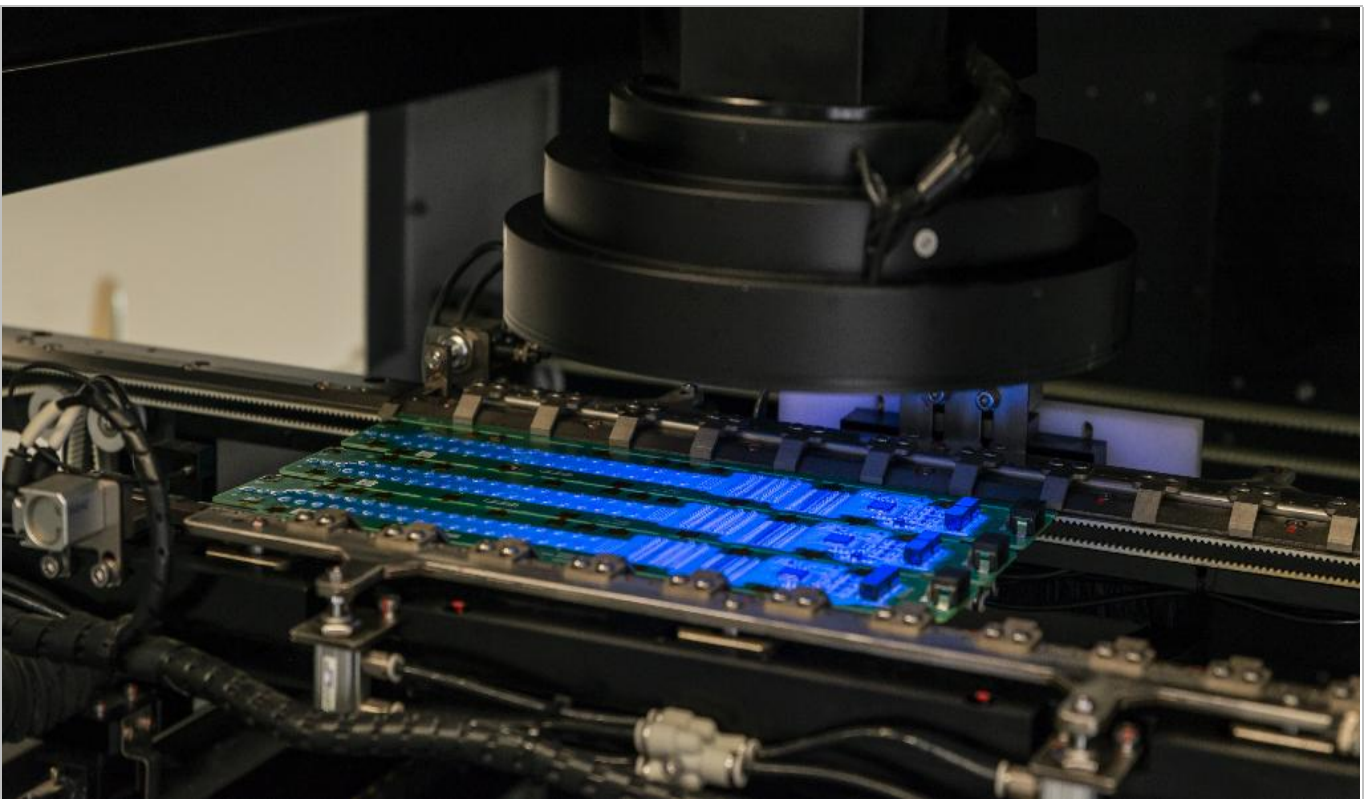

Glue width inspection

Output multiple width values (such as average, minimum, maximum) to standardize coating inspection.

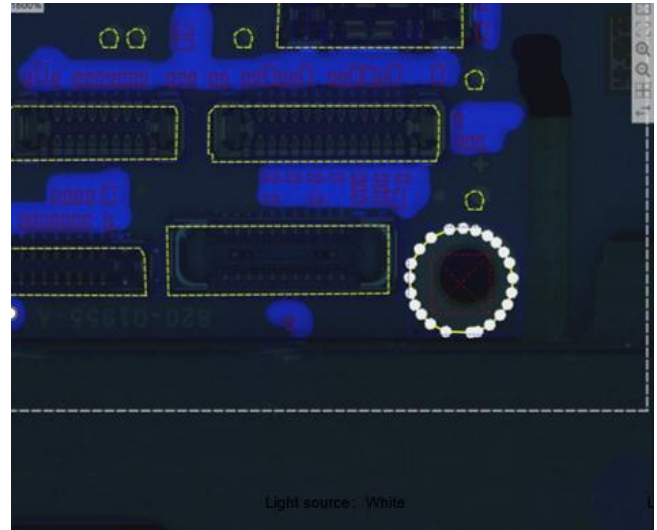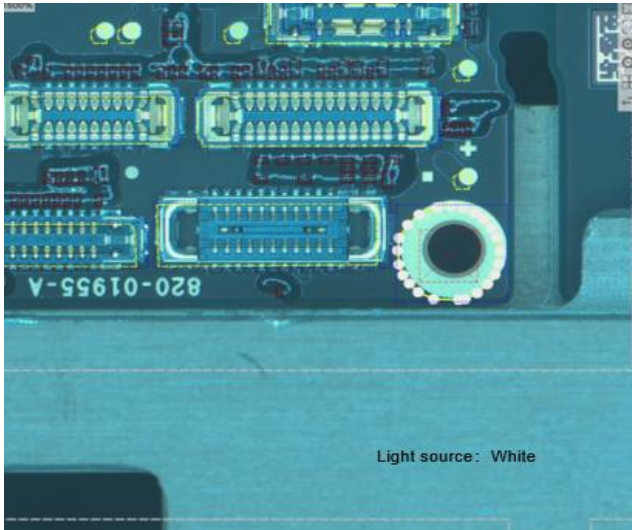**Glue thickness inspection**

Realize the flatness and thickness detection of the whole board; output the thickness value of a certain point to visualize the data.
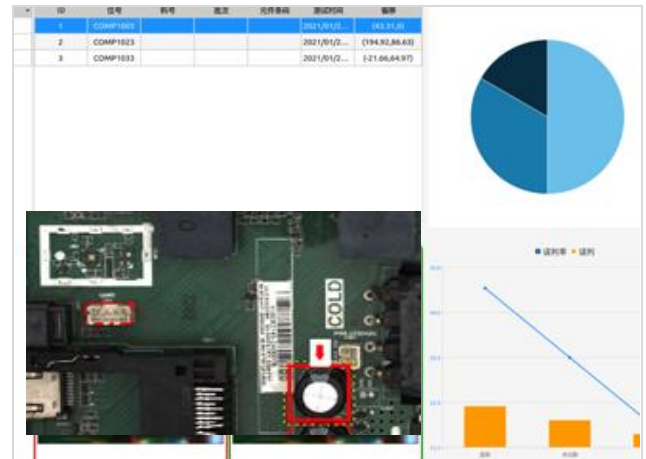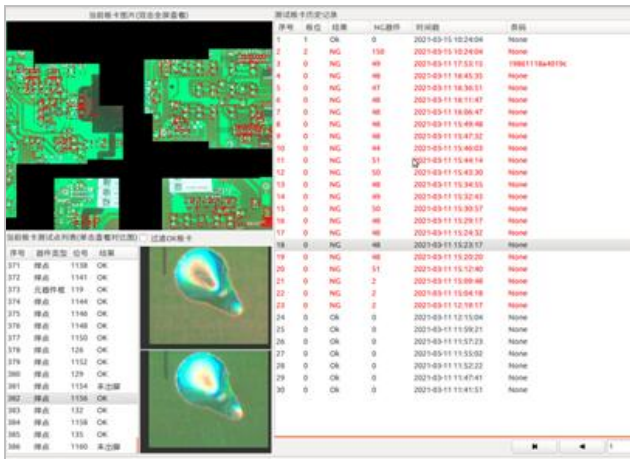

Multiple Inspection Modes

1. Support multi-in-1 board inspection. Support mixed board inspection, Support mixed material inspection.

2. Support rotation identification of multiple angles and multiple positions.

3. Support Bad Mark skip.

Light source: White

Light source: White

Configurations are optional to achieve more scene applications(Coating, SMT, DIP)

1. Automatically switch the light source, and detect plug-in, patch, solder defects at the same time.

2. Optional full-page, double-sided and other multi-configuration models detection.

MES System Data Report

1. Camera automatically reads code (bar code and QR code).

2. Complete data, including overall statistic data and all inspection information of each board inspected.

3. Support one-key export, which is convenient for traceback. Data can be effectively applied in MES system.

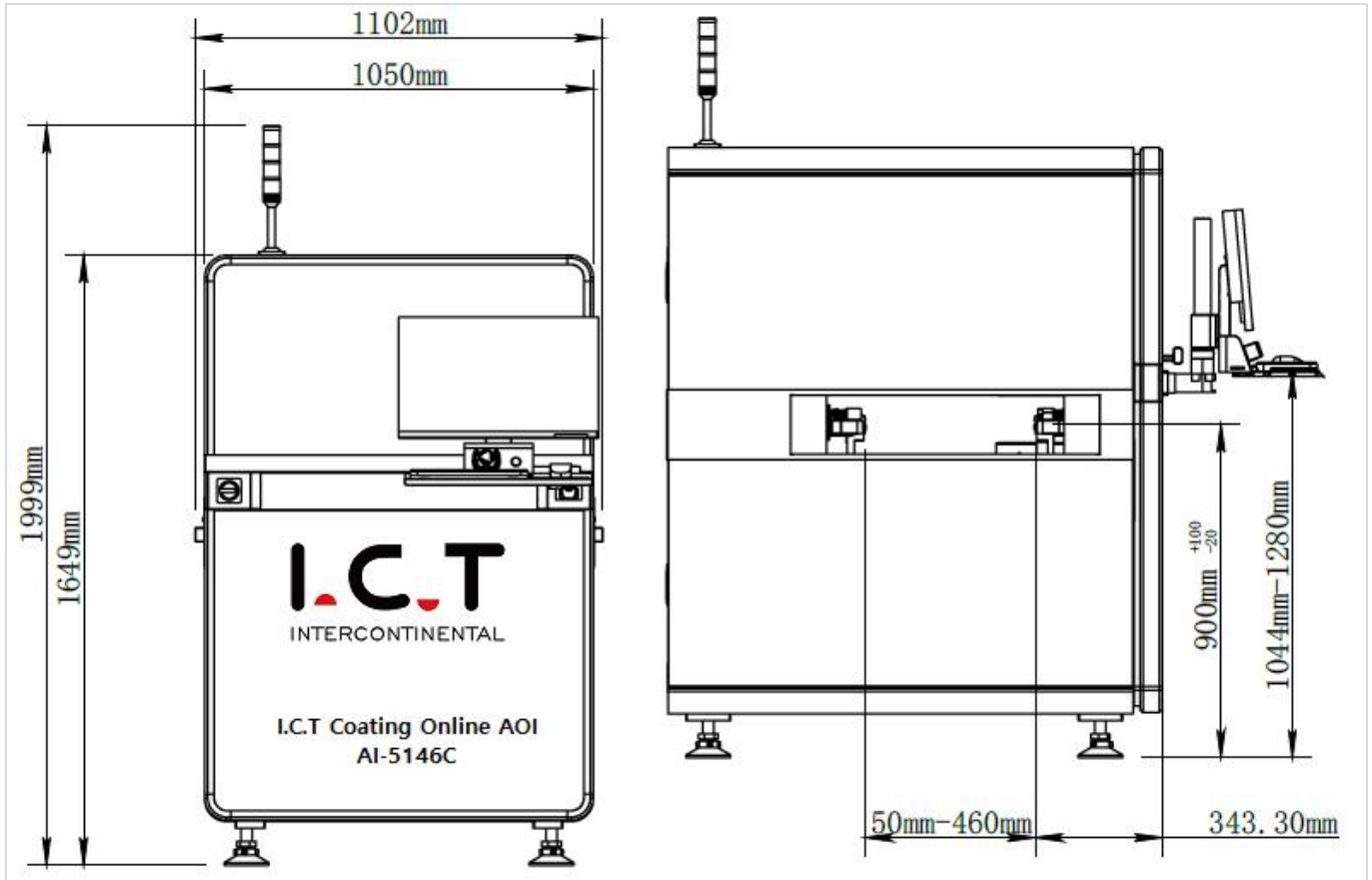**Centralized Management and flexible Service**

1. Support remote programming, debugging and management. Save changeover time. Support one-to-many judgment.

2. Remote regulation, centralized management. Reduce suspension of work. Enhance production efficiency.

3. Remote off-line programming, which will not affected inspection.

4. Remote support. Quick response and maintenance.

Specification:

Model	I.C.T Coating Online AOI AI-5146C	I.C.T Coating Online AOI AI-5146CW
FOV	15um@36*30mm(standard), 10um@24*20mm 15um@45*45mm, 10um@40*30mm	21.5um@52.6*44mm(standard), 15um@36*30mm/12MP: 10um@40*30mm 15um@60*45mm
Resolution	15um(standard)/10um	21.5um(standard)/15um/10um
Camera	Single side camera 12M	Dual side camera 5M
Light	UV + W light, (UV + RGBW)	
Inspection Speed	0.23sec/FOV	
Inspection Algorithm	CNN, Color contrast, Outline recognition, Offset inspection, Template matching, Character comparison, OCR, etc.	
Inspection Item	Coating: UV glue, UF glue, Excessive, Insufficient, Air bladder, Foreign material, Bubble, Splashing. Component: Absent, Reversed, Mis-alignment, Broken, Extra, Foreign matter Stained, etc. for THT and SMD. Solder: Insufficient Excessive Bridge, No foot, Solder void etc. Other: Bar code Recognition/QR code Recognition/OCR.	
Mixing PCB inspection	Support calling program automatically.	
PCB Size	50*50mm~510*460mm	50*50mm~510*460mm Large board mode: 730*460mm
PCB Height	Top: 25mm, Bottom: 80mm	Top: 75mm, Bottom: 75mm
PCB Thickness	0.3~6.0mm	
PCB Edge	3.0mm	
PCB Warpage	±3.0mm	
PCB Weight	Max: 10Kg	
Conveyor Height	900±20mm	
With Adjustment	Manual & Auto	
Conveyor Direction	L~R or R~L	
Motion Driver	AC servo driver + Ballscrew, repeat accuracy 0.01mm	
Operation System	Ubuntu 18.04 LTS 64bit Remote control, remote assistance, CAD file import and user-defined model training	
PC	CPU: Intel i5 Display card: NVIDIA GTX1050Ti Memory: 32G DDR, 240G SSD+2T Mechanical Hard Disk Network: 1000M Wired Network Card	CPU: Intel i5 Display card: NVIDIA GTX1050Ti Memory: 64G DDR, 240G SSD+2T Mechanical Hard Disk Network: 1000M Wired Network Card
Display	23.8 inch FHD display	
Data output	Autogenerated statistic analysis SPC	
Special function	Automatic search of elements and quick programming	
Power	AC220 50/60Hz, 5A	

Rated power	380W	570W
Compressed Air	0.4~0.6Mpa	
Communication	SMEMA	
Weight	750Kg	890Kg
Dimension	L900*W1080*H1540mm	L1050*W1335*H1650mm

Dimension:

* I.C.T keeps working on quality and performance, specifications and appearance may be updated without particular notice.

Thanks for choosing I.C.T.

I.C.T looks forward to win-win cooperation.

Thanks.