

### I.C.T Inline X-Ray Component Counting Machine



#### Introduce:

I.C.T XC-3100-Inline component counter is mainly used for quick counting of reel materials in the SMT industry. It can count 7-15 inch Tape Reel/JEDEC Tray/IC moisture-sensitive bags and other full-product items. The material types include all resistance-capacitance materials and IC materials. Using X-ray imaging technology, fully automatic detection of production materials and acquisition of image information for rapid counting, and data docking and storage with the system.

#### Features:

1. Fully automatic loading and unloading tray;
2. Intelligent AI automatic code reading;
3. Automatically label, automatically paste blank positions, and visually locate the rotation angle;
4. The minimum 01005 recognition accuracy rate is as high as 99.99%;
5. No fear of special-shaped materials and bulk materials;
6. Automatic X-RAY imaging, automatic analysis of automatic points;
7. No console, embedded display, saving space;
8. Read all the label codes of the tray and output MES;
9. Docking MES, DATABASE data can be automatically updated;
10. Automatic loading and unloading, automatic labeling;
11. Different trays can be ordered at the same time, imaged at the same time, and automatically numbered/counted;
12. 9-15S/time fast reading;
13. Reduce the number of processes, shorten the process route, and improve efficiency;
14. Self-contained database, providing query and printing.

#### TOP Advantage:

1. Simple: combined with advanced international concepts, easy to understand, easy to learn, easy to maintain;
2. Save time: warehouse management is more efficient, can save 10-20 times the time cost;
3. Hedging: Import hardware configuration, low failure rate in production, more than a decade service life;
4. Safety: Based on the general rules of international design, the highest security level;
5. Stable: mature software, hardware and top production processes ensures stability of each equipment.

**Principle:**

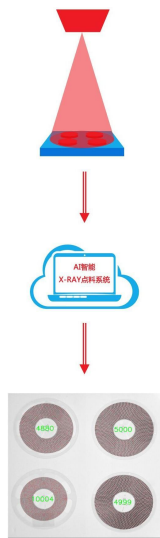
XRAY light tube

Materials to be counted

large size platform

AI intelligent algorithm system

Calculation results display



First part

X-RAY rays are emitted from the X-RAY light tube; Received and formed by X-RAY plate; X-RAY image

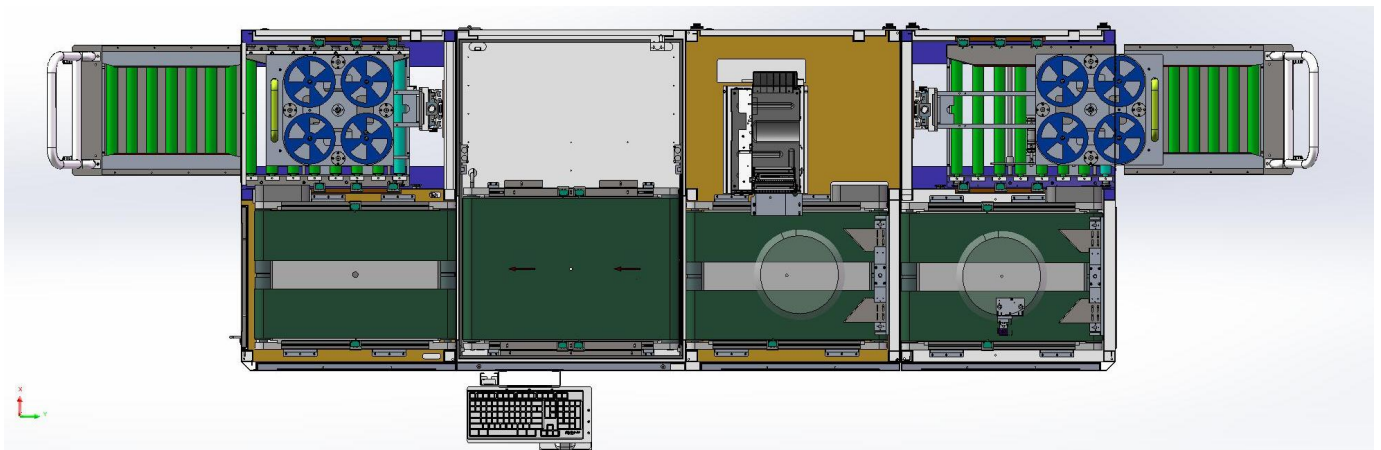
Second part

AI intelligent ordering algorithm system is fast; Match the material model and calculate the result

Third part

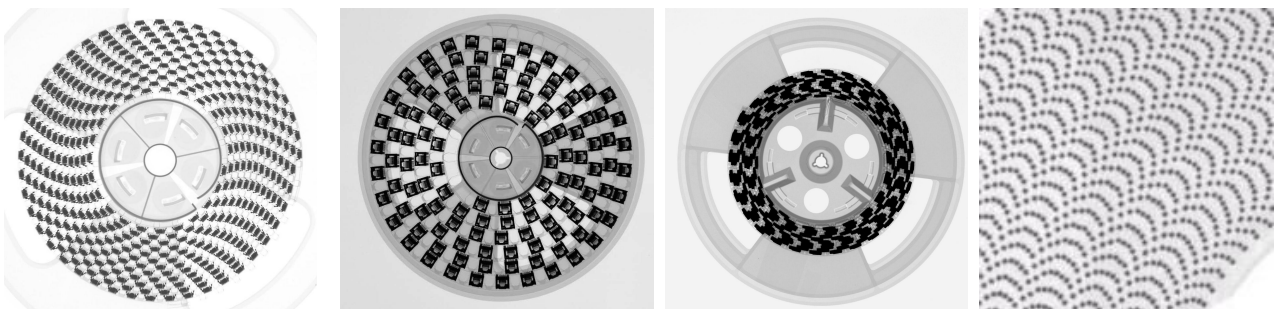
Present the ordering results and automatically upload them to the MES system

**Work Process:**

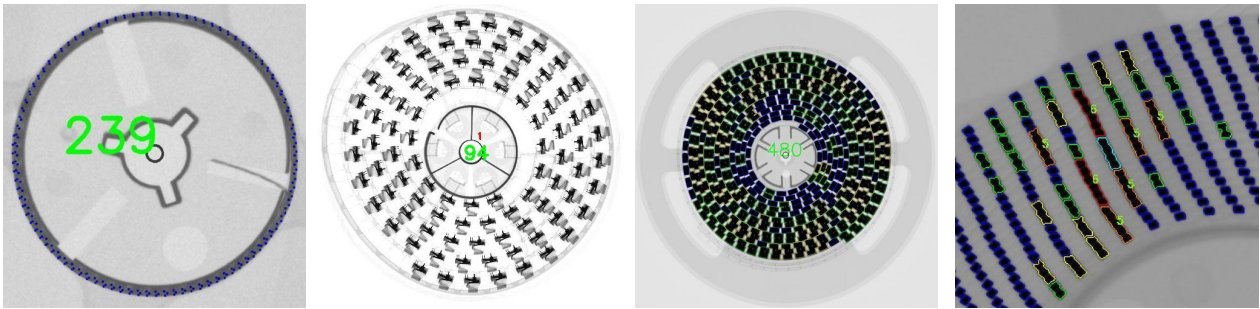


**Application:**

1. Detection Image:

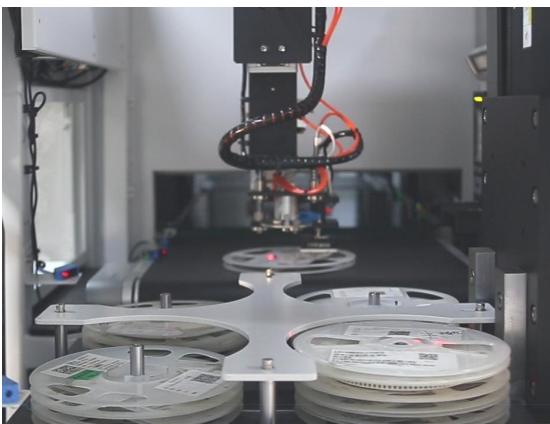


2. AI intelligent algorithm counting results Image:



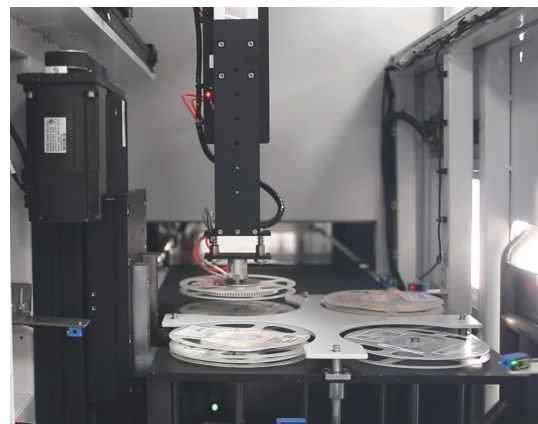
**Component Counting System**

Apply AI-optimized counting algorithms to realize inspection of various materials: standard SMD, dicing tape, JEDEC/Matrix trays, MELF, Aluminum Caps, Soic, To, BGA/CPU, tantalum metal, filters and other parts. Automatic loading and unloading without too much manual operation

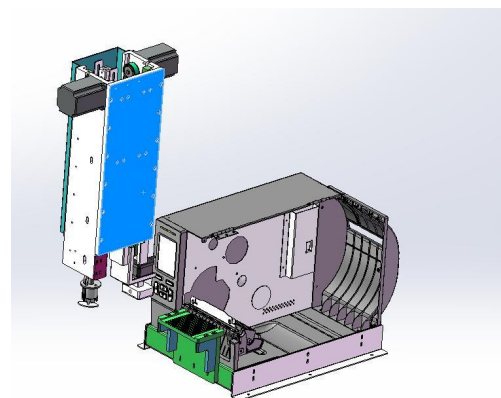
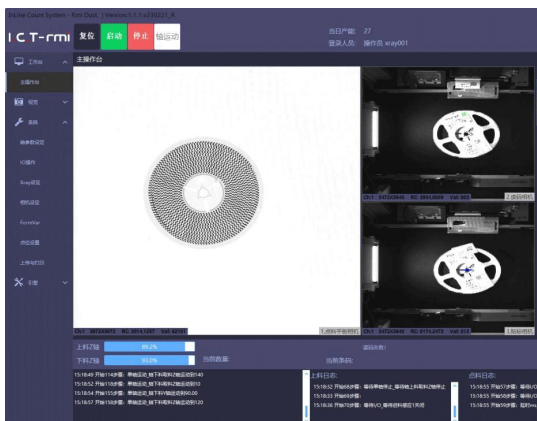


Load the materials on the loading truck, push the trolley to the corresponding position, close the warehouse door, and start the program

The mechanical gripper automatically grabs the tray and places it on the conveyor belt, and then transfers it to the counting area.



After the ordering is completed, the material is shipped out of the warehouse. The camera automatically takes a picture and locates it. The gripper sticks the new barcode to the corresponding position and takes a picture again to identify and locate it. The gripper puts the material tray into the material cart to complete the ordering of materials.



After the loading is completed, after starting the program, the tablet automatically takes pictures, automatically analyzes, and counts points. After completion, the computer automatically turns off the ray, and the data is automatically uploaded to the customer server, and new information barcodes for the material tray are generated and fed back to the printer.

The maximum printing speed is 152.4mm/s, equipped with USB2.0, SR232 serial port, compatible with different communication requirements, continuous paper, pitch paper, black mark paper, folded paper, perforated paper (outer roll type) and other paper can be used. The minimum printable size is 5mm paper, meeting most customer needs.



**Optional: Automated Guided Cart**

Compatible with customer-customized AGV protocols, programmed and configured according to needs, automatically perform material turnover tasks, reduce labor costs, improve logistics efficiency and accuracy, and optimize production processes



**Double Security**

The sheet metal frame of lead-containing alloy steel plate is equipped with a multi-functional radiation detector that can detect  $\alpha$ ,  $\beta$ , and  $\gamma$  rays, and has a built-in filter function to add another layer of safety.

**Specification:**

Model	XC-3100-Inline
Tube Type	Closed Tube
Spatial Resolution	30 $\mu$ m
Tube Voltage	50kv
Tube Current	1000 $\mu$ A
Image Capture Method	Flat panel digital imaging
Imaging Accuracy	139 $\mu$ m
Image Size	430*430mm
Resolution	3072*3072px
Pixel Accuracy	$\leq 2\mu$ m
Imaging Speed	5 EDS/s
Reading Pixels	20 million/inch

False Positive Rate (0201)	≤0.01%
Accuracy	99.99% (0201)
Detectable Minimum Part Size	01005
Operating System	Windows 10
Power	AC110-220V, 50-60HZ, 1200W
Radiation Safety Test	<1 uSV/H
Repeatability Test	≥2.0 sigma
Cycle Time	≤15s/time
Max Tray Diameter	415mm (4-15inch)
Max Tray Height	1-80mm
Max Tray Weight	≤10kg
Dimension	3008*1490*1944mm
Weight	1500kg

\* 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.**

**Thank you.**