

INLINE XC-3100

X-Ray high-precision intelligent online dispensing machine

X-Ray Inline Automatic Counting System

X-Ray counting machine series online system, fast counting and inventory

Tape Reel, JEDEC Tray, IC moisture sensitive bag



INLINE XC-3100 is mainly used for rapid 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 range of materials, the material types include all resistance and capacitance materials and IC materials. Take advantage of X

Radiography technology can fully automatically detect production materials and obtain image information for rapid counting, and combine the data with the system.

System docking and saving.

Features and advantages:

Function	Fully automatic loading and unloading tray
	Intelligent AI automatic code reading
	Automatic labeling, automatic labeling of blank positions, and visual positioning of rotation angles
Features	Minimum 0201 recognition accuracy rate is as high as 99.99%
	No fear of special-shaped materials and bulk materials
	Automatic X-RAY imaging, automatic analysis and automatic point counting
	No operating desk, embedded display, saving space
	Read all label codes of the material tray and output MES
	Connected to MES, DATABASE data can be updated automatically
	Automatic loading and unloading, automatic labeling
Advantage	Can click on different trays at the same time, image at the same time, and automatically number/count
	9-15S/time fast reading
	Reduce the number of processes, shorten process routes, and improve efficiency
	Comes with its own database, providing query and printing

Specifications:

	Model	XC-3100-INLINE
Tube	Tupe tape	Closed
	Spatialresolution	30μm
	Tube voltage	50kV (Limit 80kV)
	Tube current	0.01-1mA
Tablet	Image acquisition method	Flat-panel digital imaging
	Imaging accuracy	139μm
	Image size	427*427mm
	Resolution	3072*3072px
	Pixela ccuracy	≤2μm
Camera	Imaging speed	5 EDS/s
	Code reading pixels	20 million/Inch
System	Misjudgment rate (0201)	≤0.01%
	Accuracy	99.99% (0201 for example)
	Minimum part size detectable	008004
	Operatingsystem	WINDOWS 10
	Order record keeping	Save by day,no capacity limit , TXT.CSV.XLS
	Power supply	AC110-220V 50-60HZ
	Power	1200W
	Radition safety test	<1 uSV/H
	Repeatability testing	≥2.0sigma
	CYCLE TIME	≤15s/time
Stracture	Counting speed	9-15 S/tray (CHIP 0201)
	Maximum disc diameter	415mm (4-15INCH)
	Maximumheightofcheckable materialtray	1-80mm
	Maximum weight of detectable reels	≤10kg
	Machine size	3087*1194*1957mm(L*W*H)
	Machine size(Including printer)	3087*1488*1957mm(L*W*H)
	Machineweight	1500kg

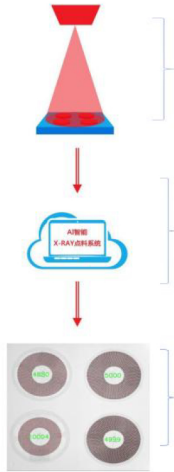
X-RAY principle description :

Schematic diagram of X-ray working principle

X-RAY light tube
 SMT waiting tray large
 size X-RAY flat plate

 AI intelligent ordering algorithm system

 Ordering result display



The first part is

the X-RAY rays emitted by the X-RAY light tube and received and formed by the X-RAY flat plate.

X-RAY image

the second part

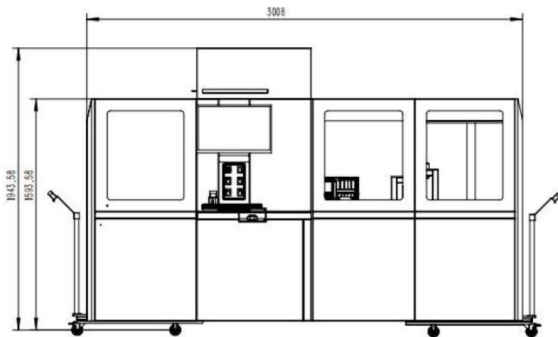
The AI intelligent material ordering algorithm system quickly matches the material model and calculates the results.

The third part

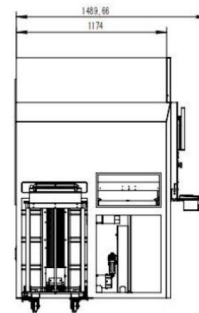
presents the ordering results and automatically uploads them to the MES system.

Dimensions :

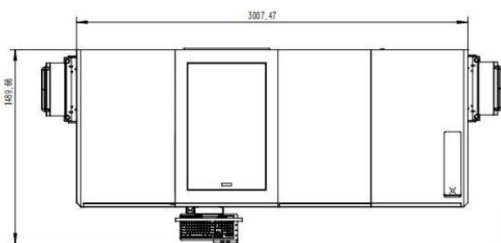
Front view



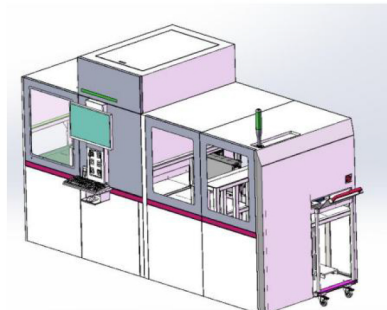
side view



side view



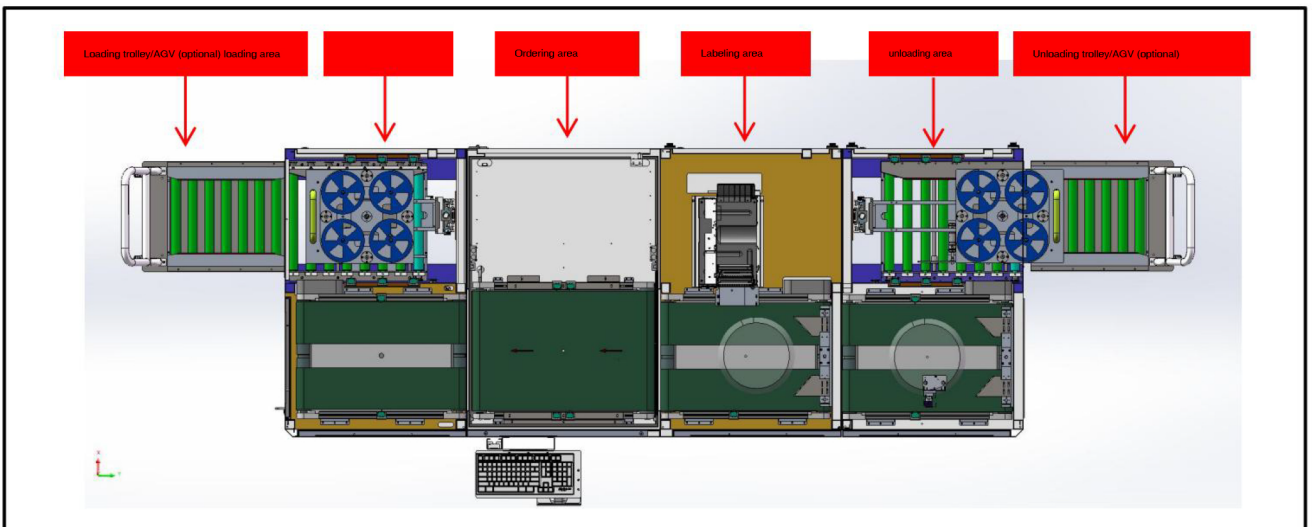
full picture



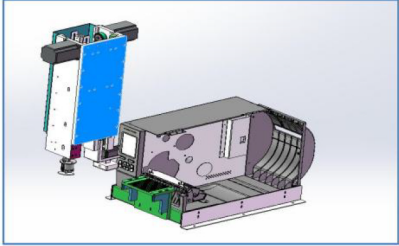
Online fully automatic operation process :

Automatic feeding	Automatic ordering end analysis
	
<p>Put the materials into the loading cart and push the cart into the corresponding position.</p> <p>The gripper grabs the tray and puts it on the conveyor belt</p>	<p>Transfer to the ordering position, close the warehouse door, the tablet will automatically take pictures and automatically sort</p> <p>Analysis and counting. After the counting is successful, the computer automatically turns off the ray and the material tray</p> <p>The quantity is uploaded to the customer server and a new information barcode is generated for the material tray.</p>
4-axis robot automatic transcoding	Loading and unloading truck Automatic blanking
	
<p>automatically generates unique codes and automatically prints unique codes.</p> <p>Can automatically generate unique labels based on customer incoming materials labels</p> <p>One code function</p>	<p>After the receiving is completed, the material is discharged from the warehouse. The material tray flows out through the conveyor belt and is photographed to determine position, grab the new barcode and stick it at the corresponding position. After sticking it, take a photo.</p> <p>Position, grab the material tray and put it into the material cart to complete the ordering of materials.</p>

Ordering Flow Chart:

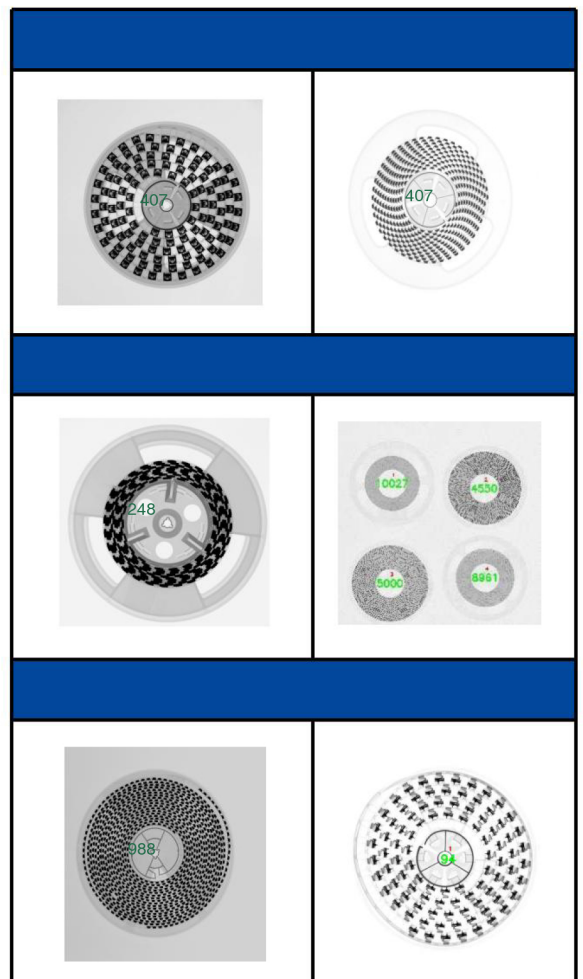
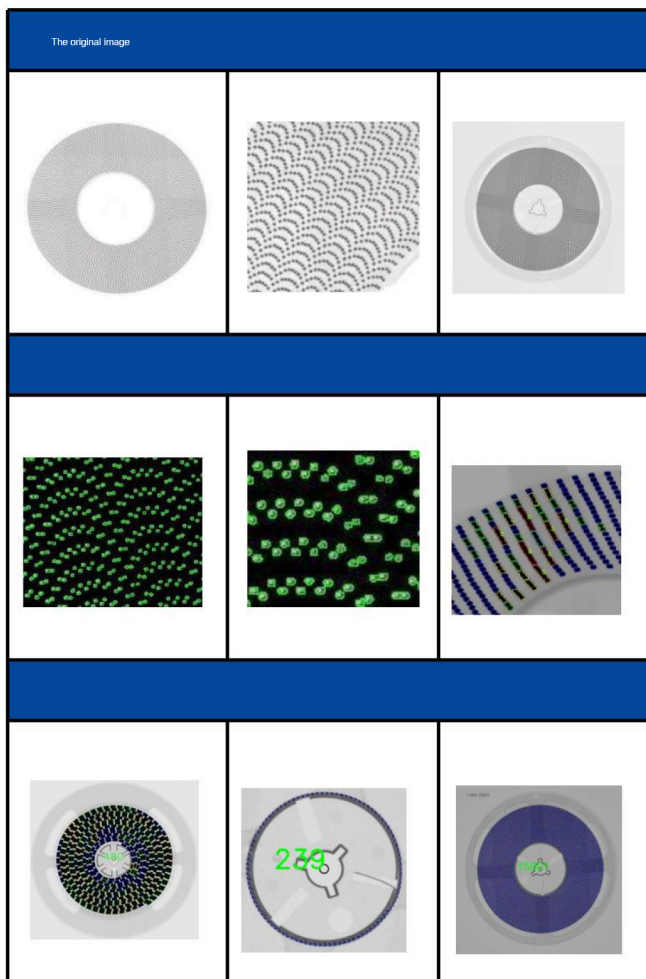


Quality equipment parameters:

Printer specifications			
	Printing module	resolution	8 points/mm (203 DPI)
		Maximum print speed/width	162.4mm (6")/sec/108mm (4.25")
		Volume size	204mm (width) X 164mm (height) X 280mm (length)
		weight	2.4 kg (5.29 lbs)
Hardware specifications	Memory	8 MB Flash memory, 16 MB SDRAM	
	Communication Interface	USB2.0, serial port (RS-232)	
	buzzer	standard	
Power Specifications	enter	AC 100-240V, 2A, 50-60HZ	
	output	DC 24V, 3.75A, 90W	
Paper specifications	Paper type	Continuous paper, spaced paper, black mark paper, folded paper, perforated paper (outside roll type)	
	Minimum paper length	5 mm (0.2")	

AI algorithm principle (Algorithm Principle):

Calculation legend:



Compared with traditional dispenser :



INLINE XC-3100 Intelligent Online Pointing Machine		Traditional dosing machine + manual	
Ordering speed 9-15S/time		80S/time	
4-axis robot loading and Inventory cycle	<p>Fast and efficient: Originally, the workload of several days was manually counted.</p> <p>The dotting machine often takes a few hours to complete. Material label error proofing machine system, full induction recognition of the material tray, real-time docking with the printer,</p> <p>Take any tray of materials and instantly print the material information on the tray.</p>	<p>The cycle is long: a document goes from filling in, collecting to keyboard input. takes a day or more, which makes the production scheduler only</p> <p>It can provide users with inventory information based on the inventory information from the previous few days or even a week ago.</p> <p>Set a delivery date.</p>	
data transmission	<p>Realize data upload and synchronization: Intelligent cloud control, every</p> <p>The pictures of the trays ordered by a device every day will be automatically displayed through the Internet.</p> <p>Automatically store pictures in the cloud database, engineers will</p> <p>These images are optimized in the background, and then the optimized materials are</p> <p>The disk data is updated to the database every month to improve data</p> <p>Count accuracy. The longer the time, the accuracy of the material tray will decrease.</p> <p>Higher, the accuracy is as high as 99.99%. No need to spend 3-5 days</p> <p>Time to enter data on the material trays in the factory, the user can directly</p> <p>Directly used, the accumulated points database is shared to all machines.</p> <p>With more data, the ordering is more reliable and accurate.</p>	<p>Use manual calculation methods: You need to first calculate the product according to the packaging</p> <p>The list lists the calculations one by one. When multiple products are to be calculated, the middle</p> <p>When nesting semi-finished products, it will be a very cumbersome task and very</p> <p>It is difficult to achieve accurate and timely accounting, and also need to check the latest inventory</p> <p>Only then can the inventory report be obtained.</p>	
4-axis robot loading			
Accuracy	<p>The accuracy is even higher: (1) Using X-ray imaging technology,</p> <p>Detect production materials and obtain image information,</p> <p>Rapid calculation through the image algorithm independently developed by Ruimao Optics number, the actual quantity of the material can be obtained, and the material can be</p> <p>The number of materials is classified and counted according to categories, and the equipment data information is</p> <p>Information docking with customer MES/ERP system, real-time data interaction,</p> <p>Greatly reduces the probability of inventory errors and ensures accurate</p> <p>The data. (2) X-ray dispensing machine is easy to operate</p> <p>Easy to understand, more convenient, and the ordered products are neat and orderly. and</p> <p>X-ray counting machine automatically points materials with high precision and zero error.</p> <p>You can work 24 hours a day without taking a break during work.</p>	<p>Information is prone to errors: (1) When the workload is heavy,</p> <p>Manual input often results in transcription and typing errors, missing</p> <p>memory problems, resulting in a lot of ineffective work and duplication of work, resulting in</p> <p>Inaccurate electronic component inventory information makes companies bear additional costs</p> <p>of inventory. (2) Manual ordering of ingredients is sometimes done in a hurry,</p> <p>Not placing materials in an orderly manner.</p>	

Test parameters of	5 people per class	Time per tray	Total number per class
traditional dispensing machine		80s	1800 plates
INLINE XC-3100	0 people	15s	4800 plates