

I.C.T Automatic Programming System



Introduction:

The Programming System is a highly efficient, fully automated, intelligent IC programming machine designed for the production of large quantities of electronic products. Each module is completely independent, programming speed is fast and efficiency is much higher than parallel mass production programmers. The system design modules are optimised for short project switching times and high reliability.

Features:

1. Various input and output modules can be expanded. Module types are: Tray to Tray, Tray to Reel, Reel to Tray, Reel to Reel;
2. Equipped with a high-definition industrial CCD to automatically identify the component direction and compensate for the component direction to a certain extent;
3. The material taking and discharging mechanism has self-positioning function, which is used to locate the programmer socket and the material taking and discharging position;
4. It has various protection or fool proof functions, each expansion module has empty material detection;
5. The tray is fed automatically, and the tray is programmed. If there are defective products and the tray is not full, the tray will be replenished automatically;
6. The option can be connected to the MES system, or the lightweight CPS system can be selected to output the report results;
7. Multiple detection protection, air source pressure, vacuum pressure, component floating height, component stacking, missing parts, etc;
8. Special programming adapter, you need to provide samples and product specifications to customize the exclusive adapter;
9. Modular design, quick replacement of adapters can quickly replace products and improve efficiency.
10. Equipped with dual ion blowers to eliminate static electricity, avoid NG materials caused by static electricity, and reduce the defective rate of production.

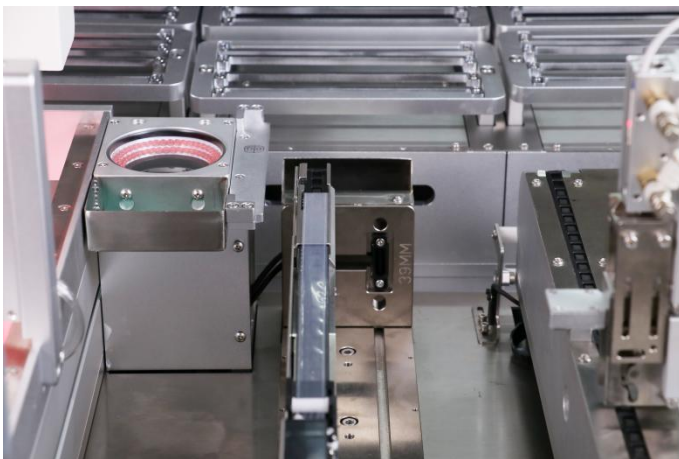
Exercise system:



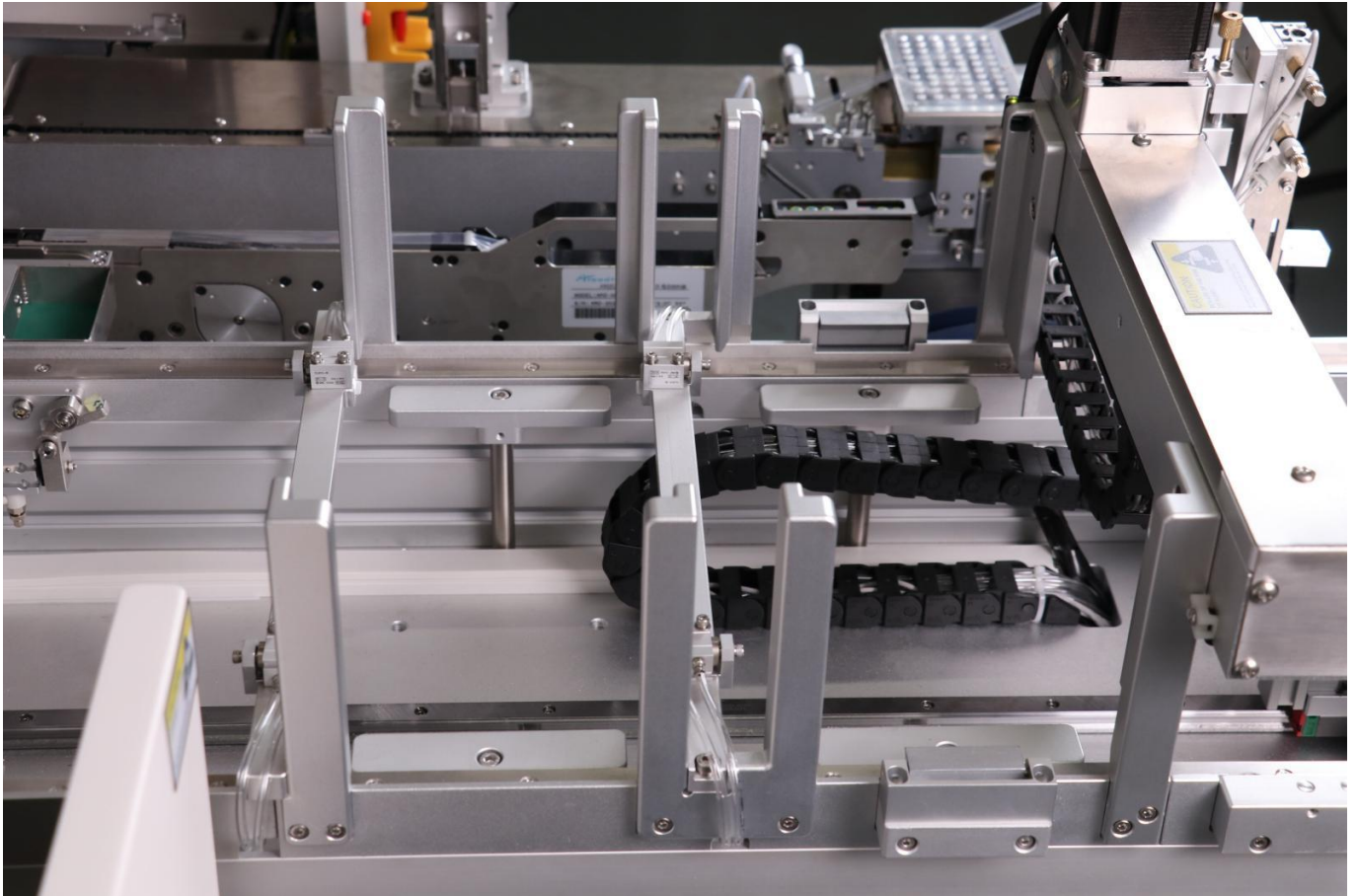


1. High-precision Panasonic servo motor, repeatable positioning accuracy reaches $\pm 0.015\text{mm}$;
2. Double linear slide rails + high-precision screw rods cooperate with each other to ensure the stability of the overall machine;
3. Each axis has a limit sensor, and the software sets the limit position to ensure maximum machine safety.

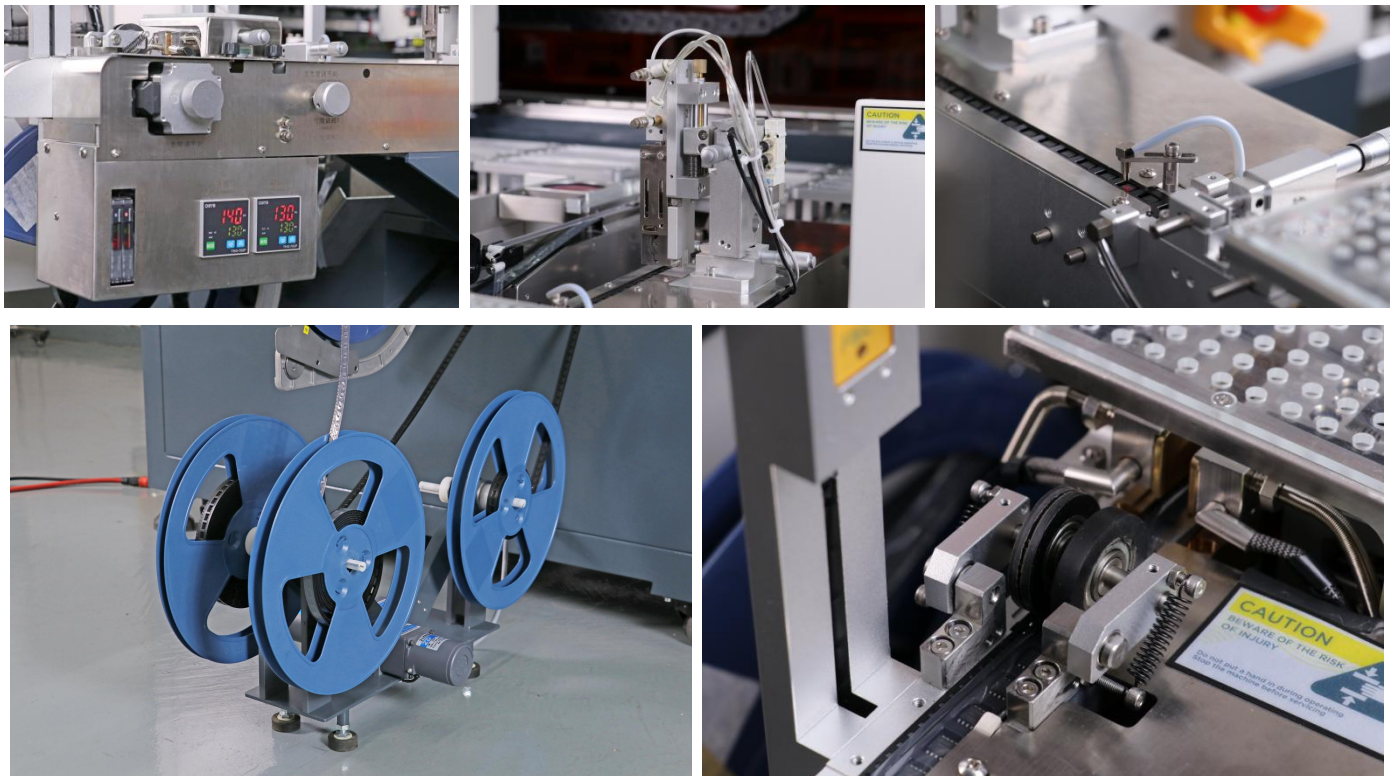
Feeder system:



1. It has 2 feeder stations, both of which can place 8-24mm tape feeders;
2. Patented automatic tray feeding supports 15 trays of materials at the same time;
3. Divided into 4 areas, programming picking area, programming waiting area, programming completion area, marking area, and programming waiting area. More pallets can be added at any time without stopping the machine for loading;
4. The movable component locks the pallet to ensure that the pallet in the marked area will not be cheap.



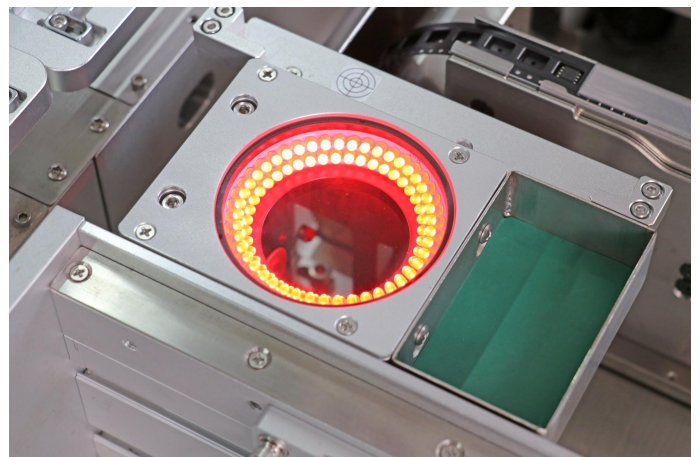
Packaging system:



1. Double heaters and double pressing wheels accurately control the temperature to ensure that the packaging film can adhere closely to the tape to avoid component loss;
2. Comes with a built-in sensor that can detect components before packaging to avoid abnormalities such as misalignment and stacking of components;
3. The stepper electrical appliance controls the reel rotation speed, closely matching the machine programming speed;
4. The mark device can mark components before packaging to reduce errors;
5. With embossed knurled knob, the guide groove can be adjusted to fit the width of the reel;
6. The material packaging method can also be changed according to actual needs, pallet to reel, tube to reel, reel to pallet, tube to pallet.



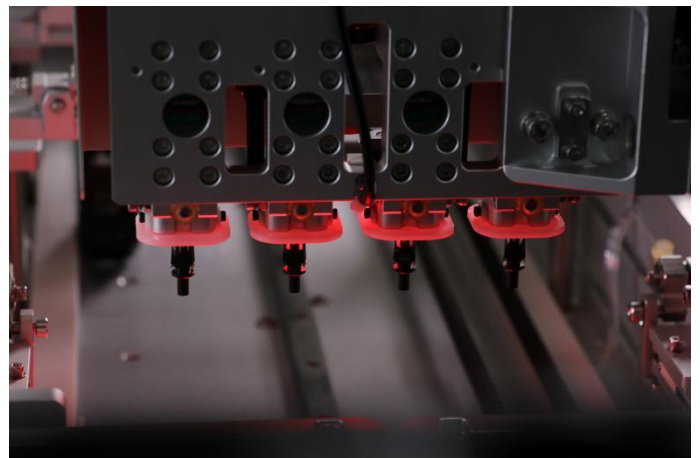
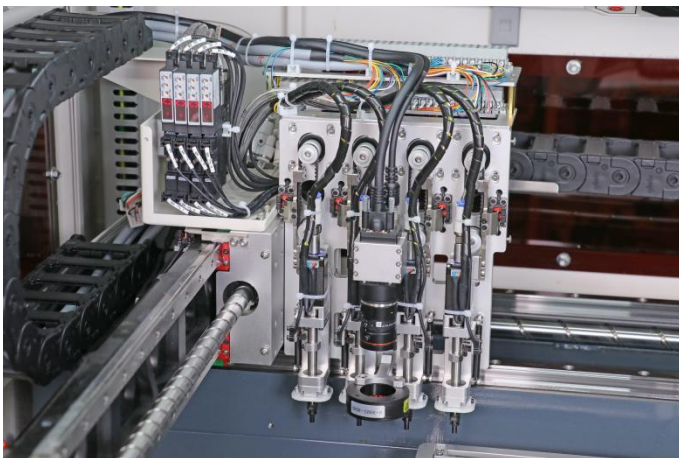
Programming system:



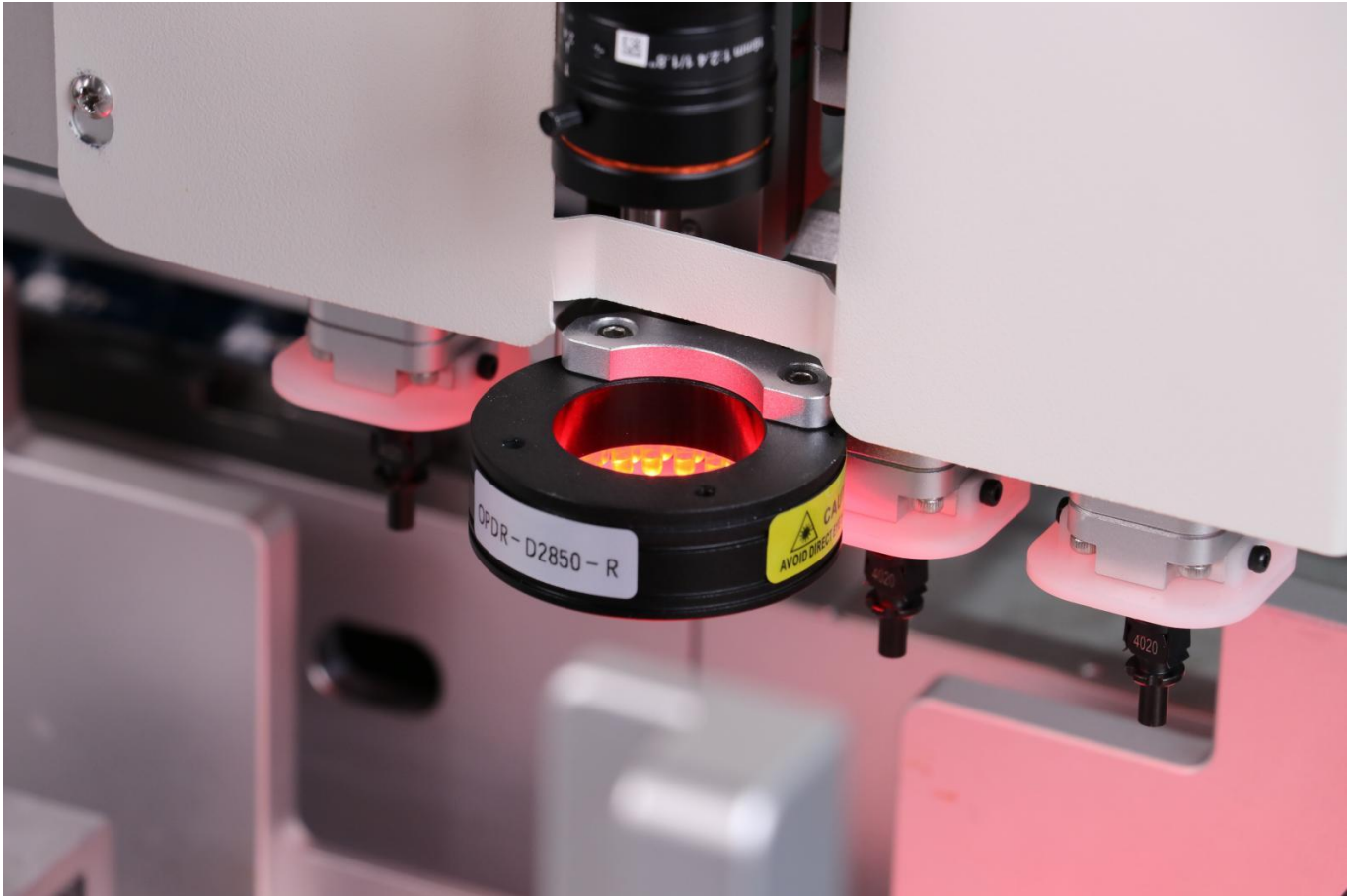


1. It has 8 work areas, supports large-volume programming, and greatly improves programming production efficiency;
2. Modular design, no cumbersome steps are required to switch products, just replace the programming adapter;
3. Exclusive one-to-one customized programming adapter, supporting multiple IC types, including EEPROM, NAND/NOR FLASH, MCU, etc;
4. To fix the NG recycling box, you can place a tray next to it as an NG tray or as a refill tray. After NG, replenish a component from this tray and reprogram it to ensure that the OK tray is full;
5. Can be compatible with customers' own programming adapters according to usage requirements.

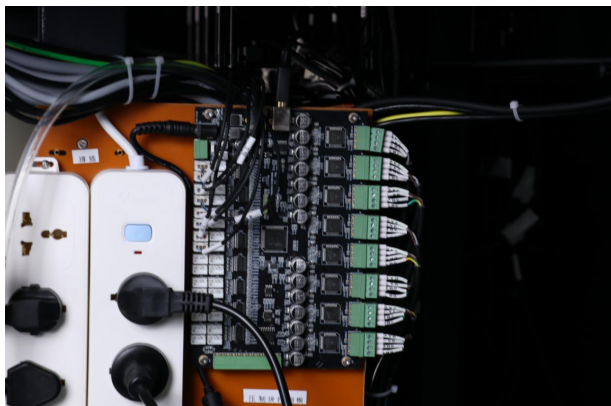
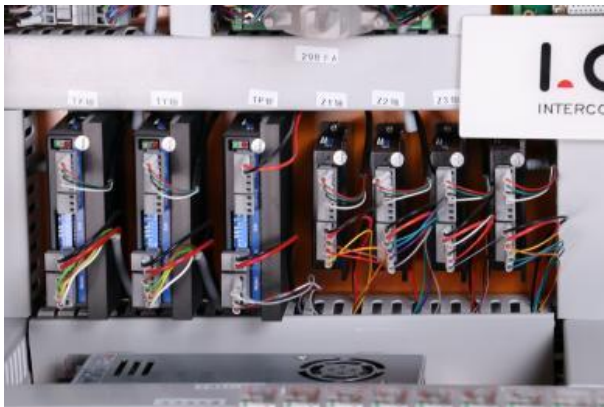
Visual system:

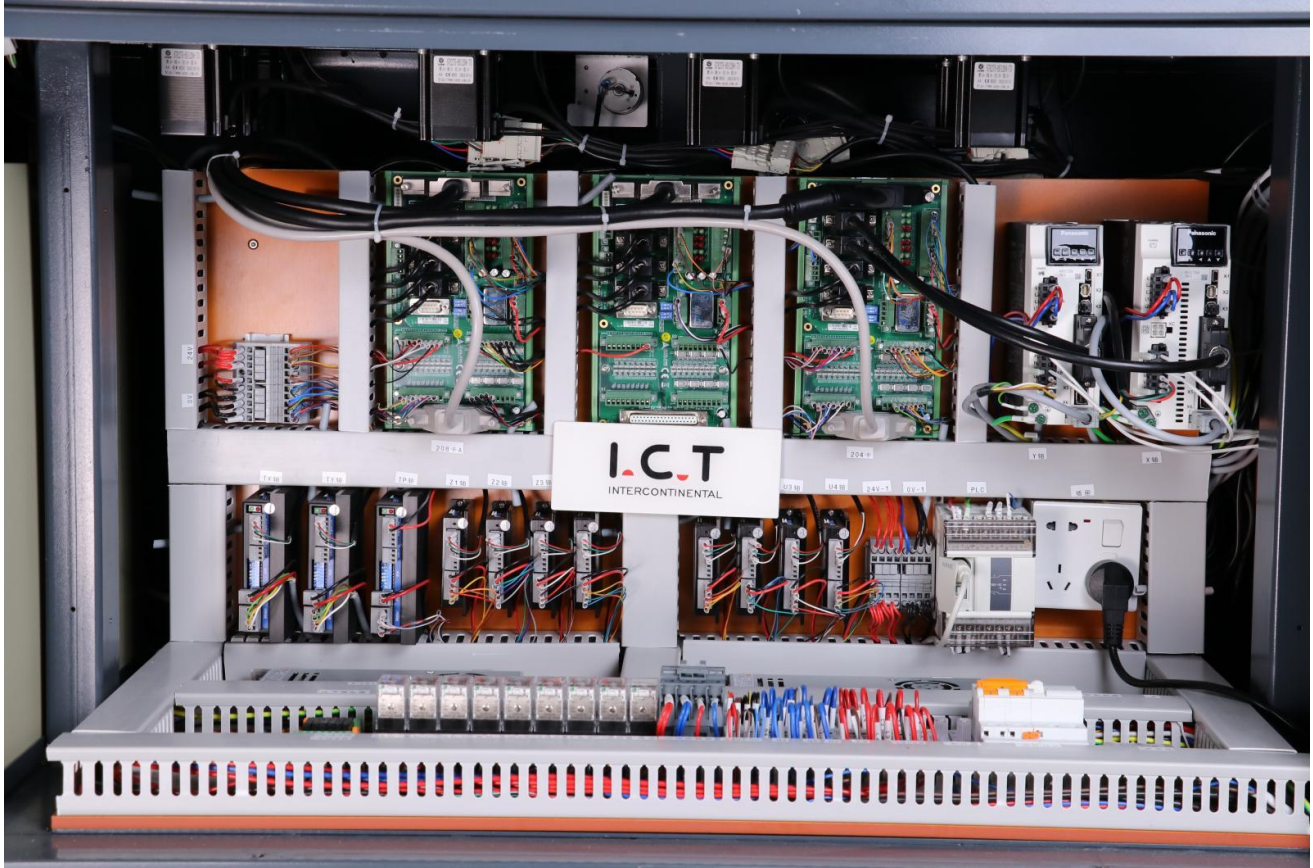


1. Equipped with high-definition CCD, visual recognition, precise positioning, and certain position compensation for components;
2. Equipped with 4 independent suction nozzles, which can pick up and discharge materials asynchronously.



Control System:





1. Panasonic PLC and Panasonic driver ensure the overall stability and scalability of the machine;
2. Comply with CE standards, international design concept;
3. Underlying design based on Industry 4.0.

Operating system:

1. The all-English interface meets international needs, and the software is easy to learn and operate;
2. It can monitor machine action status, programming NG/OK, XYZ axis position, camera calibration, etc., in real time.

Material List:

No.	Item	Brand
1	Ball screw	NSK/TBI
2	Linear guides	HIWIN
3	Servo motor	PANASONIC
4	Stepper motor	Leadshine
5	Cylinder	AIRTAC
6	Industrial controls/Motion control cards	ADLINK
7	Sensor	PANASONIC
8	Camera/Lens	HIKVISION

Specification:

Item	Model	I.C.T-910
Transmission system	Efficiency of the machine	Standard machine: Equipped with universal burner of Puro and other brands: 8 sets of 32-64sit burners: UPH 2000-3000PCS/H; Equipped with 204AP brand universal burner: 3 sets of 12sit burners: UPH1600-2200PCS/H.
		A small number of diverse modes: equipped with 3 sets of 204A burners, UPH 1600-1800PCS/H.
		Packaging conversion mode: pallet to tape production capacity of 4000PCS/H (12mm tape products as an example)
	Control precision	Precision servo screw drive, accuracy: X-axis $\pm 0.015\text{mm}$; Y-axis $\pm 0.015\text{mm}$; Z-axis $\pm 0.03\text{mm}$; P-axis $\pm 0.03\text{mm}$; U(θ)-axis $\pm 0.15^\circ$
	Suitable package form	PLCC, JLCC, SOIC, QFP, TQFP, PQFP, VQFP, TSOP, SOP, TSOPII, PSOP, TSSOP, SON, EBGA, FBGA, VFBGA, BGA, CSP, SCSP, and so on. (Open Top adapters, some ICs need to be customized with special adapter consumables).
Includes precision upper and bottom CCD positioning system.		
Feeding and unloading device	Tray IN/ OUT	Supports automatic Tray feeding, can send 10 trays of JEDEC Tray products at the same time, and supports marking tray components after programming
	Tube IN/ OUT	Support 4-tube IC electromagnetic vibration feeding
	Tape IN/ OUT	Electric feeder, supports 8-24mm self adhesive film or hot press packaging.
	Conversion of packaging methods	Different packages are converted to each other, Tray packed to Tape packed, Tape packed to Tray packed.
Other	Nozzle	4pcs
	Camera	2pcs (Component camera + Marking camera)
	Feeder station	2pcs (8-24mm)
	Ion fan	2pcs

	Operating system	Windows 10
	Display	19" LCD (16:9)
	Power	Operating voltage: 190~240V/50Hz, 2.0KW
	Air pressure	0.5-0.7Mpa
	Noise	Less than 80dB
	Dimension	L1450*W860*H1450mm
	Weight	700kg

Standard mode:

No.	Programming Mode	Machine configuration
1	Tray to Tray	Tray +Main machine
2	Tray to Reel	Tray +Main machine+ Reel Feeder
3	Reel to Tray	Reel Feeder+ Main machine+Tray
4	Reel to Reel	Reel Feeder+ Main machine+Reel Feeder
5	Tube to Reel	Stick Feeder+ Main machine+Reel Feeder
6	Tube to Tray	Stick Feeder + Main machine+Tray

* 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.