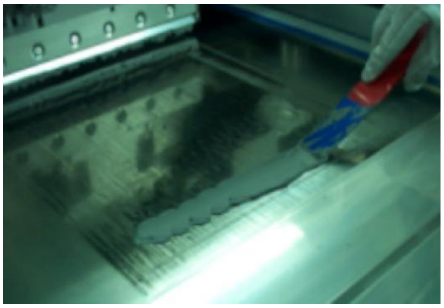
SMT Fully automatic Stencil Printer GPM-510

"Industry 4.0": is the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things and cloud computing.
"Smart Factory": Within the modular structured smart factories, cyber-physical systems monitor physical processes, create a virtual copy of the physical world and make decentralized decisions.
"Information Sharing": Over the Internet of Things, cyber-physical systems communicate and cooperate with each other and with humans in real time, and via the Internet of Services, both internal and cross-organizational services are offered and used by participants of the value chain.

A Manufacturing Execution System (MES) is a control system for managing and monitoring work-in-process on a factory floor.
An MES keeps track of all manufacturing information in real time, receiving up-to-the-minute data from robots, machines and employees.
The goal of MES is to improve productivity and reduce cycle-time,total time to produce an order.

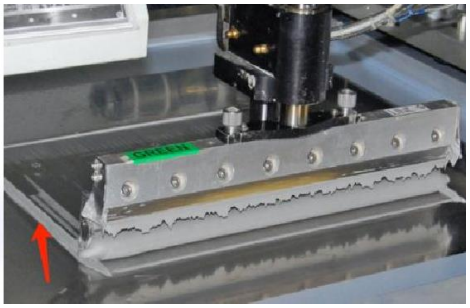
Automation is especially attractive in processes where manual interaction can result in quality or safety issues. GODZILA GPM-10 is trying to integrate the industrial 4.0 and MES system, And achieve maximum automation level.

This is the process with SMT printers need to be AUTOMATED



Still relying by hand to supply solder paste?

Continue to waste solder paste? How to ensure quality?



Solder paste is always on both sides, can not clean up?

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GODZILA Printer:


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Introduce：

GODZILA GPM-10 is a high precision automatic solder paste printer, correspond to industrial 4.0 and MES system.through a higher level of automation,achieve zero defect.

Features：

1,High positional accuracy, repeated positioning accuracy ±0.01mm; printing accuracy 0.025mm

2,Support glue printing,Automatic control improves production efficiency, quality control and saves production cost

3,Automatic PCB calibration,Squeegee pressure adjustable,Automatic printing,Automatic stencil cleaning

4,Programmable motor controls separation speed and distance among squeegee,stencil and substrate,to realize multi-method separation.

5,Multi-functional PCB positioning system for convenient and accurate PCB positioning.

6,Programmable PCB lifting platform ensure the PCB to lift to a proper height

7,Adopt company independently developed suspended print head with automatic pressure adjustment system. Support on-line real time pressure feedback and automatic squeegee pressure balancing. Accurate pressure control ensures perfect paste forming effect.

8,Applicable PCB types:LCD TV,STB,LED,family cinema,vehicle electronics.besides general electronics products.

9.SMEMA standard.

TOP Advantage:

1. Simple: combined with advanced international concepts, based on the Oriental-designed operating system, easy to learn.
2. Expertise: learn imported reflow oven's advanced design concepts, and the machine core components are using imported top brands.

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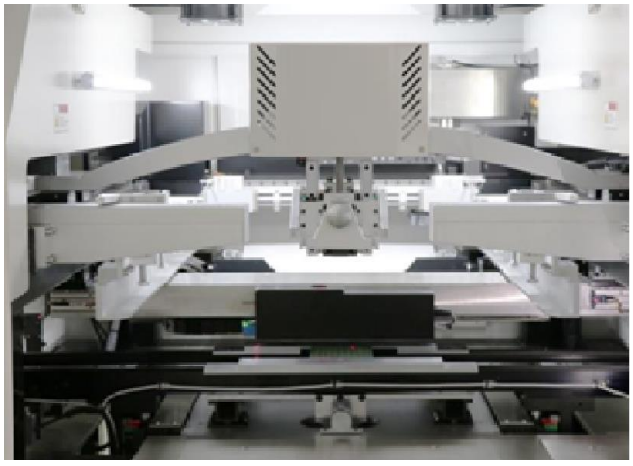
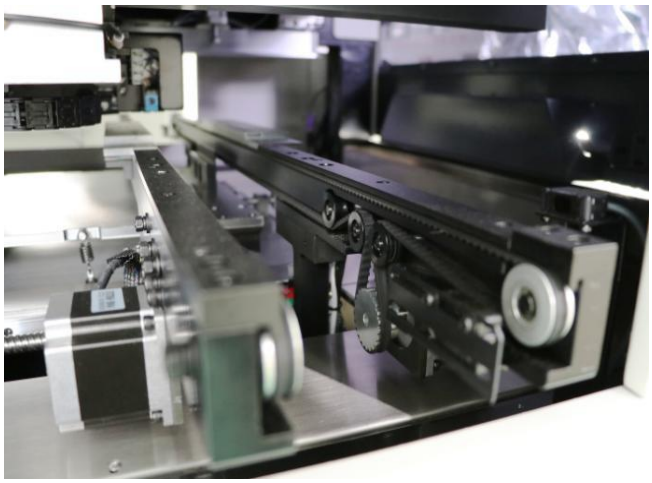
3. Hedging: Import hardware configuration,low failure rate in production,more than a decade service life.
4. Safety: Based on the general rules of international design, close to imported reflow rating, the highest security level.
5. Stable: mature software, hardware and top production processes ensures stability of each equipment.



Print system

Arch bridge suspension type direct connection squeegee structure. The squeegee is independently controlled by two high-precision stepping motors to ensure accurate and stable pressure.

The double side slide positioning rails ensure the accuracy and stability of the squeegee before and after operation.

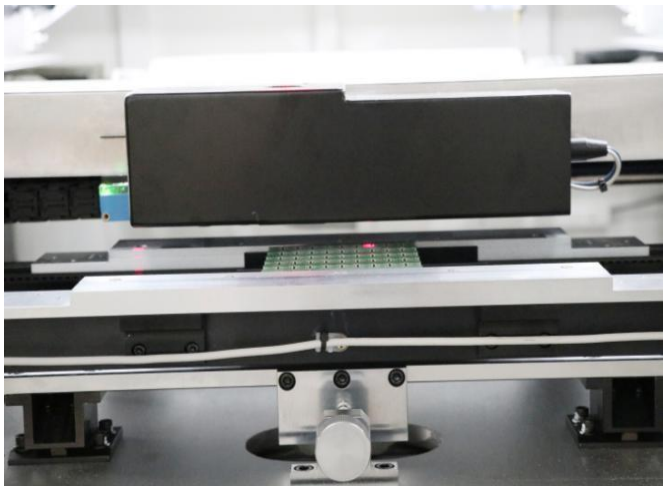


Transport system

The unique belt conveyor system can effectively prevent stuck pcb. The motor controls the speed and the stop position is precise.

PCB entry and exit directions are freely available.

The side clamps and vacuum are used to effectively clamp the PCB to ensure the smooth contact between PCB and stencil.

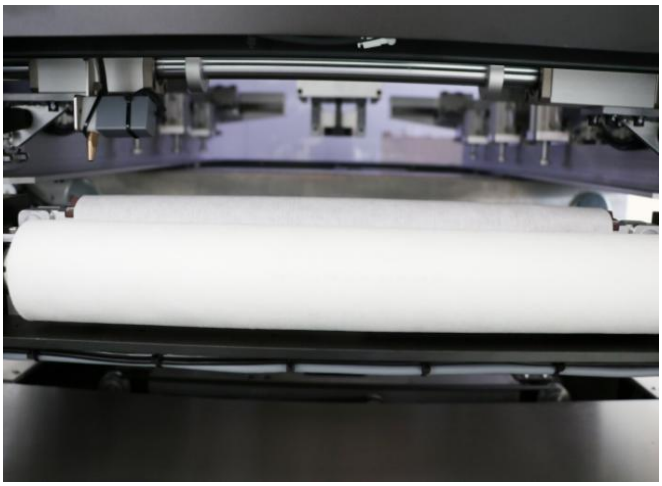


Vision system

Uniform ring and high brightness coaxial light source.

Advanced up and down matching system.

Full range light source adjust can identify various types of Mark. Suitable for tin plating, copper plating, tin spraying, FPC and other PCB to ensure high accuracy.



Cleaning system

Dry,wet and vacuum cleaning, can also be manual cleaning.

CCD and cleaning part are designed separately.

Unique spray cleaning system, from top to bottom, spray evenly. Software control alcohol and paper consumption,save consumable.

Special exhaust motor, vacuum strong and effective.

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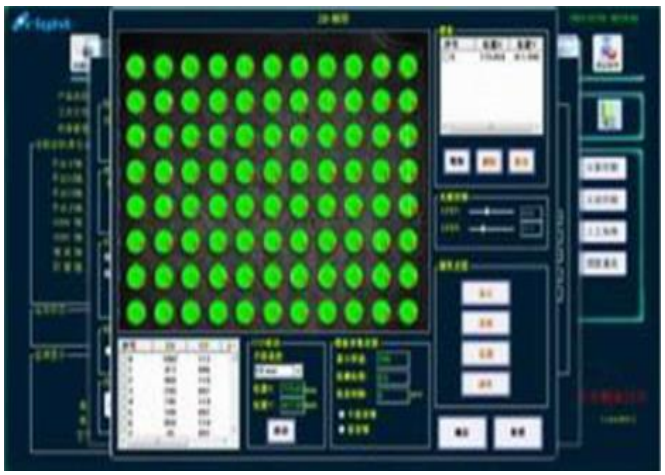
Platform system

The three axis linkage adjustment system has superb dynamic characteristics and quickly realizes the adjustment of PCB.

Drive by direct connection motor, fast and ensure high precision.

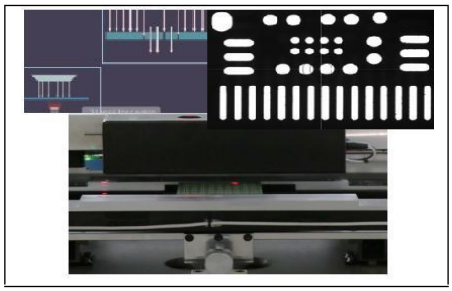


Operating system

Windows 7,Friendly MMI interface, teaching and navigation function. Operation log, fault record analysis and other diagnostic functions.

New program is controlled within 5-10 minutes.

Option function:

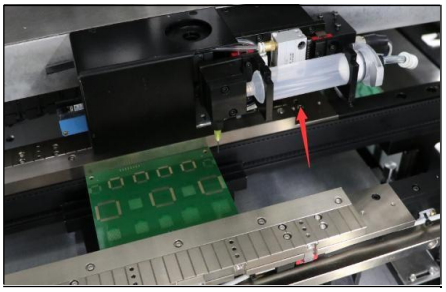


Stencil Inspection System

Through light source compensation using CCD to inspect stencil hole,can quickly detect and judge whether the stencil is clean or not, and automatically clean to ensure that the printing is more perfect.

Auto Supply and Inspect Solder Paste

Software setup time automatically added to ensure the amount of solder paste. Detection of solder paste by sensors can ensure continuous printing for a long time, ensure quality and improve efficiency.



Auto Dispensing System

According to different process requirements,dispensing glue, paste flux,solder paste, dispensing line and other functions. dispensing head has automatic heating function to improve glue flow.

OPC Squeegee

Adjust printing area according to PCB size

No stagnant solder paste, no wastage

Best printing quality at all time

SPI On Line

Connect with SPI to form a closed loop system. When bad information feedback,printer will adjust automatica. It can adjust automatically in 3pcs and cleaning stencil automatically.

Industry 4.0 and MES

By automatically uploading or exporting the state and parameter, the intelligent production can be realized, the docking with customer MES system can be realized.

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Materials List:

No.	Item	Brand	Original
1	Ball screw	KURODA, REXROTH	Japan, Gemany
2	Linear Guideway	IKO, REXROTH	Japan, Gemany
3	Servomotor& driver	Panasonic	Japan
4	Sensor	OMRON, LEUCE, KEYENCE	Japan
5	Stepper motor	SANYO, Leadshine	Japan. China
6	Cylinder	SMC, FESTO	Japan, Gemany
7	CCD Camera	SENTECH	Japan
8	Motor	BPMC	Japan
9	Switch	SMC, IDEC	Japan
10	Bearing	NSK	Japan
11	Soft Cable	IGUS	Gemany
12	Tanks chain	IGUS	Gemany
13	PC	LENOVO,DELL	China,Gemany

Specification:

Model	GODZILA GPM-10
Frame Size(mm)	370*370 ~ 737*737, Thickness: 25~40mm
PCB Size(mm)	48*48 ~ 510*510
PCB Thickness	0.4~6mm
PCB Warpage	<1%
Smallest component package handled	0201 SMD (Metric)
Transport Height	900±20mm
Printing accuracy	15 ±25 microns @ 6 sigma
Positioning accuracy	±10 microns @ 6 sigma
Transport Direction	Left-Right; Right-Left; Left-Left; Right-Right
Transport Cycle Time	Max 15 seconds
Transport Speed	Max 500mm/s
Support System	Magnetic Pin/Up-down table adjusted/support block
Clamping System	Side clamping,vacuum nozzle,Automation retractable Z pressure
Printer Head	Two independent motorised printhead
Printing Speed	5~200mm/sec
Squeegee Pressure	0~15kg
Squeegee Angle	60°/55°/45°
Squeegee Type	Stainless steel (standard), plastic
Release Speed	0.1~20mm/sec
Cleaning System	Dry, Wet, Vacuum
Table Adjustment Ranges	X:±10mm;Y:±10mm;θ:±2°
Table Adjustment control	motor
Fiducial Mark Types	Circle,Triangle,Square,Diamond,Cross
Fiducial Mark Size	0.5~3.0mm
CCD FOV	5*7mm

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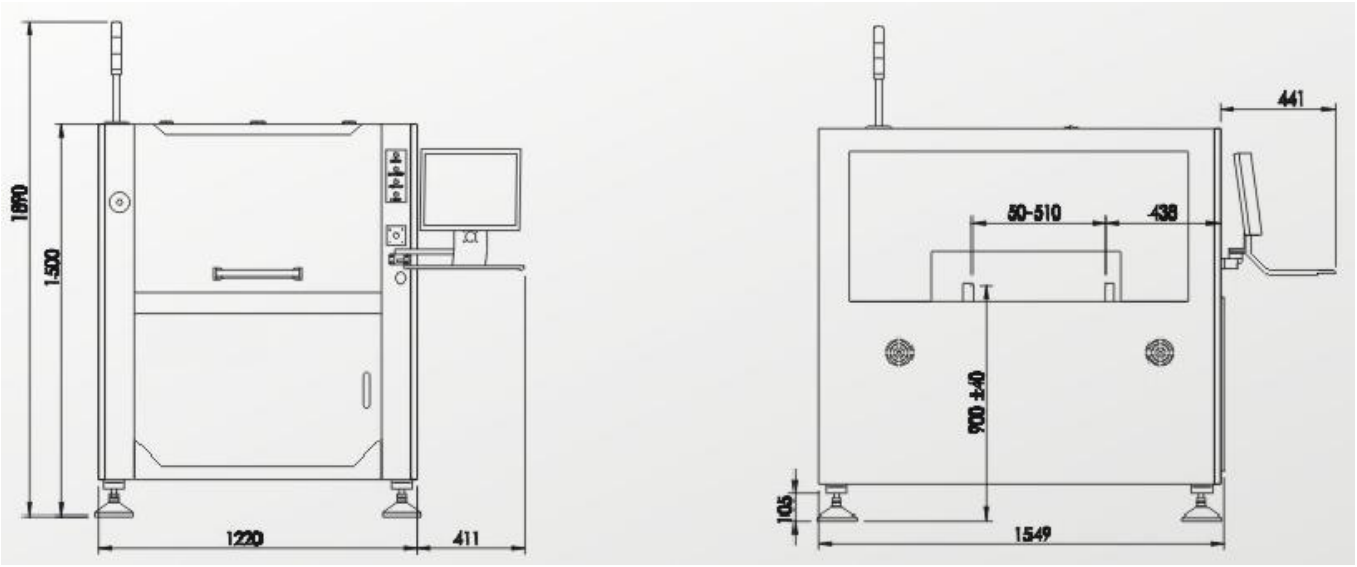
Vision Methodology	Digital CCD, Geometry pattern match, Top and bottom
Inspection	2D Inspection(Standard)
Repeat Accuracy	±0.007mm(CPK ≥ 2.0)
Fiducial Type	Standard geometry
Fiducial Recognition	Automatic
Cycle Time	<7s (Exclude Printing & Cleaning)
Product Changeover	<5Mins
New Product Set-up Time	<10Mins
Air Pressure	4.5~6Kg/cm2
Power Supply	AC:220±10%,50/60HZ,3Kw
Control Method	PC Control
Dimension(mm)	L1220*W1549*H1500
Weight	Approx:1200kg

* The data is obtained under ambient temperature of 25℃ and humidity of 60%

Dimensions:



Thanks for choosing GODZILA

GODZILA looks forward to win-win cooperation.

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