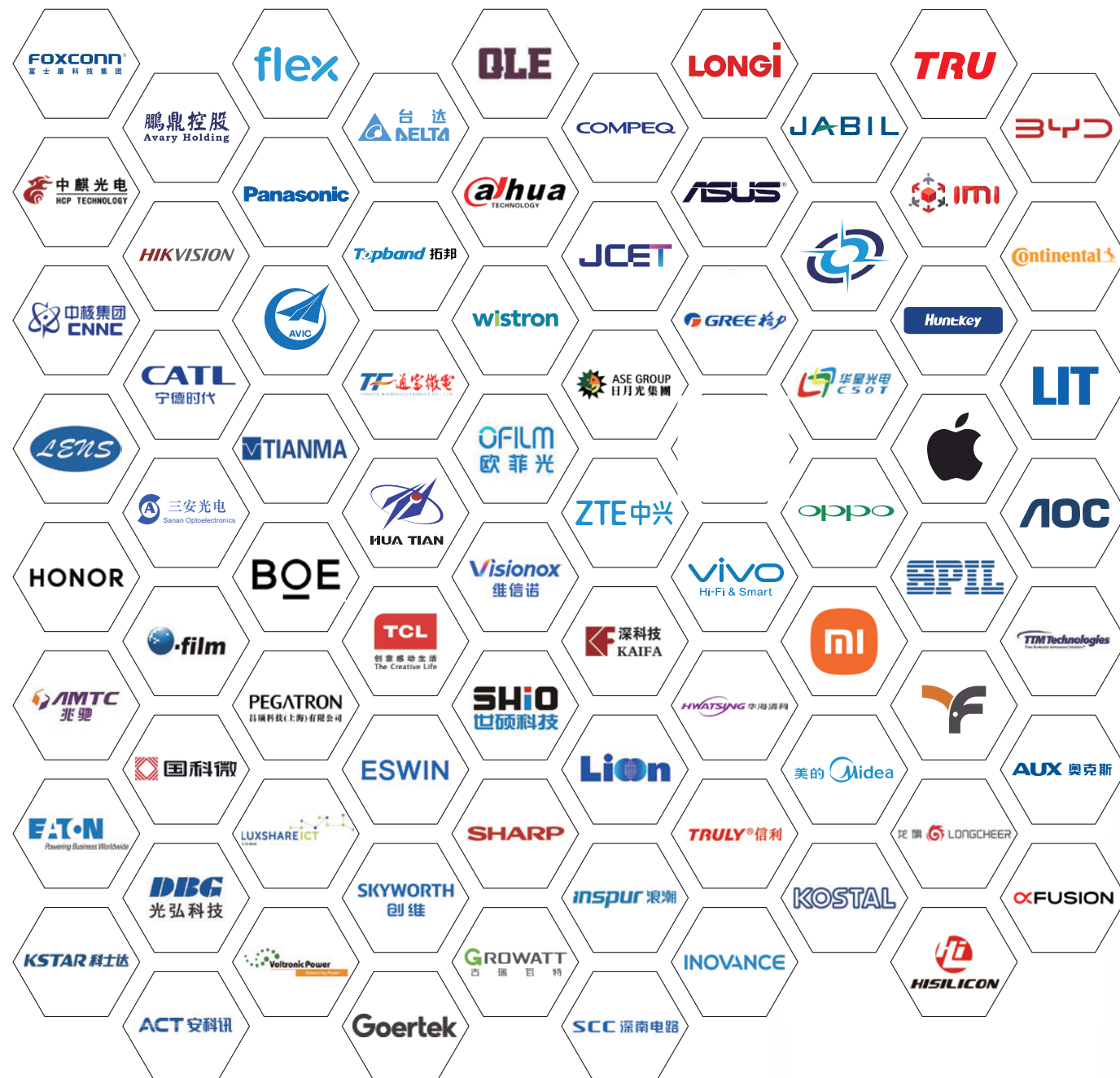




SELECTIVE
SOLDERING

选择性焊接设备

PRODUCT BROCHURE



专注 持久 分享
Concentration Persistence Sharing

JT选择性波峰焊

JT Selective Wave Soldering



选择性波峰焊是应用于PCB插件通孔焊接领域的设备;因不同的焊接优势,近年来成为流行趋势;应用范围广泛:军工电子;航天轮船电子;汽车电子等高标准焊接性能的需求,体现焊接工艺的灵活性和扩展性。第三代JT在线式选择性波峰焊,新的创新功能适用于未来需求;模块系统具有多种配置的可能性,理想的情况下可以满足各种需求定制。

Selective wave soldering is a device used in the field of PCB PTH soldering; Due to the unique "customized" soldering advantages of each component, it has become a popular trend in recent years. It is widely used in military electronics, aerospace, automotive electronics, and other high standard welding quality requirements, reflecting the flexibility and scalability of welding processes. JT online selective wave soldering, with new innovative features suitable for future needs; Modular systems have multiple possibilities for configuration and can ideally be customized to meet various needs.

□ 产品特点

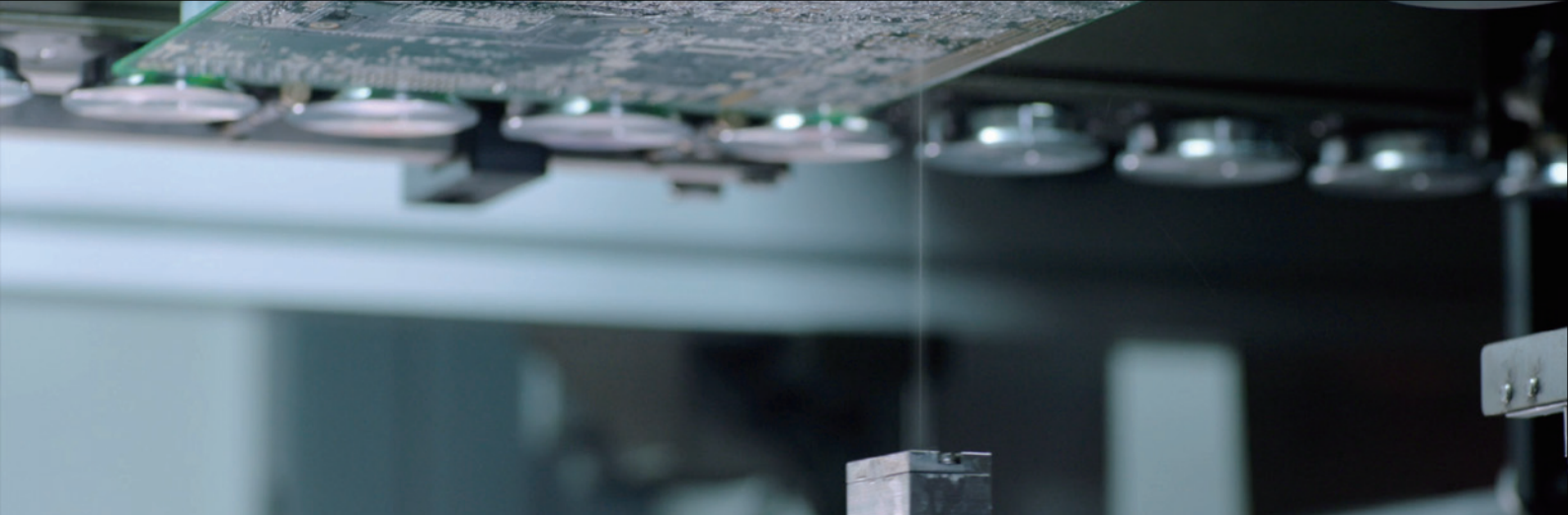
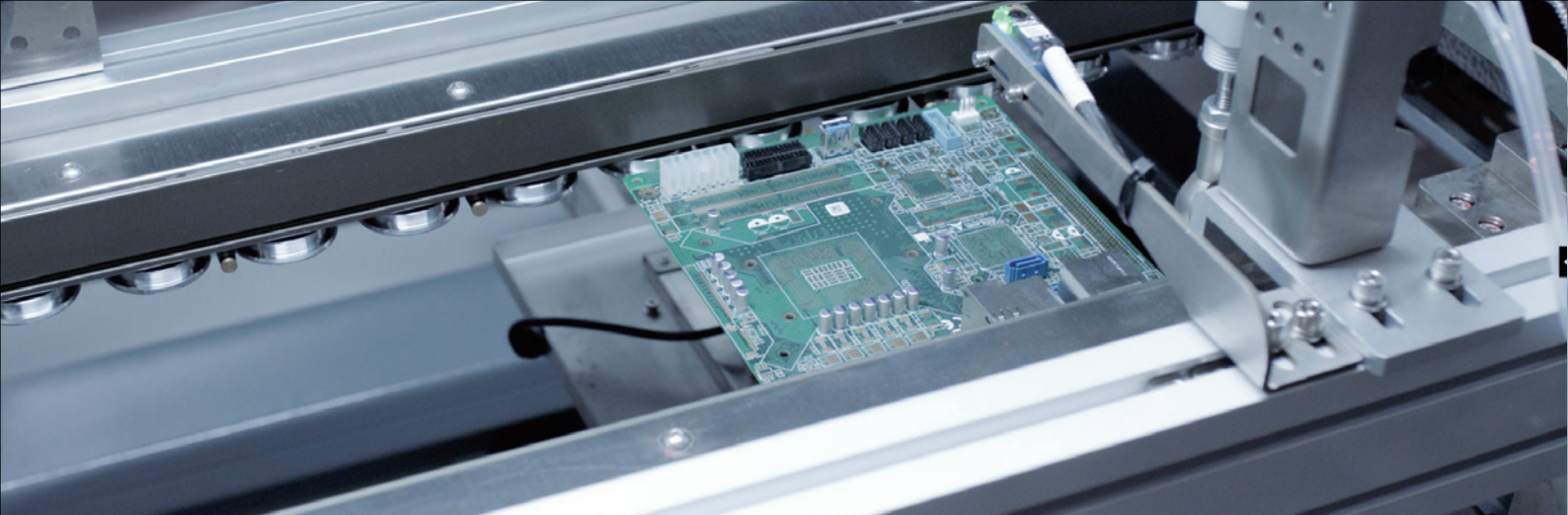
Product features

- PCB最大尺寸: 700 x 610 mm;
- 精密选择性松香喷雾系统;
- 热功率对流预热模式;
- 双缸电磁泵Z轴异步控制系统;
- 锡波液位及高度监测系统;
- 焊接过程可视化;
- 制程数据上传、监控、MES系统。
- Max. PCB size 710 ~ 610 mm;
- Precision selective spray flux system;
- Thermal power convection preheating module;
- Electromagnetic pump module;
- Wave level and height monitoring system;
- Soldering process visualization system;
- Process data upload, monitoring; MES system.



多焊接扩展一体机
Multi-welding expansion all-in-one machine





运输模块系统

Transport Module System

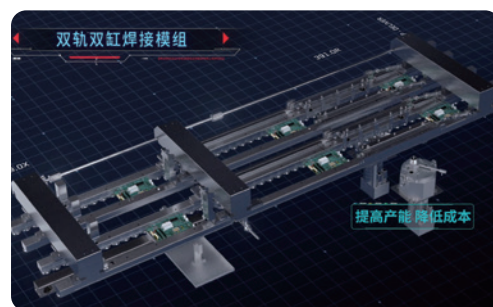
选择性波峰焊运输系统配置链条加滚轮式传动和全转盘运输，分段控制运输系统；统一调宽控制系统，能够更好的适用裸板和治具的应用；轨道宽度通过软件自动控制，最大满足700 x 610mm的各种尺寸PCB板生产；可选择双轨运输系统，满足裸板双拼的同时焊接。

The selective wave soldering transportation system is equipped with chain and roller type transmission and full turntable transportation, with segmented control transportation system; The unified width adjustment control system can be better applied to the application of bare plates and fixtures; The track width is automatically controlled by software, which can meet the maximum production requirements of various sizes of PCB boards of 700 x 610mm; A dual track transportation system can be selected to meet the requirements of welding bare plates simultaneously.

产品特点

Product features

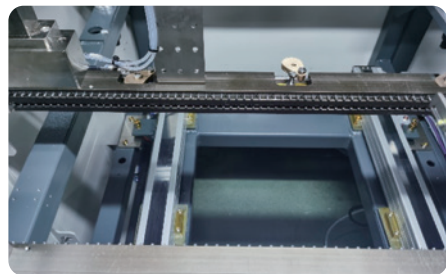
- 高精密丝杆调宽
- EIS系列选择焊采用链条+转盘组合的运输方式，适合裸板焊接
- NIS系列选择焊采用全转盘运输方式，适合治具焊接
- 重载选项: Max. 30 kg
- High precision screw width adjustment
- The EIS series adopts a combination of chain and rotary table transportation method for welding, suitable for bare plate welding
- The NIS series selection welding adopts a full rotary table transportation method, suitable for fixture welding
- Overload option: Max. 30 kg



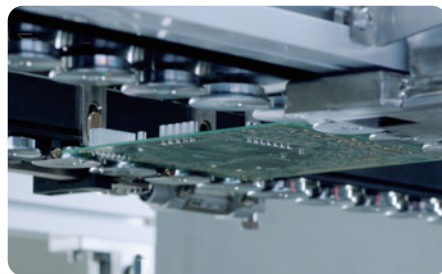
双轨双缸焊接模组
Double rail and double cylinder soldering module

相关硬件

Related hardware



链条式运输
Chain transportation



转盘式运输
Roller transportation



XYZ夹紧
XYZ clamping

喷雾模块系统

Spray Module System

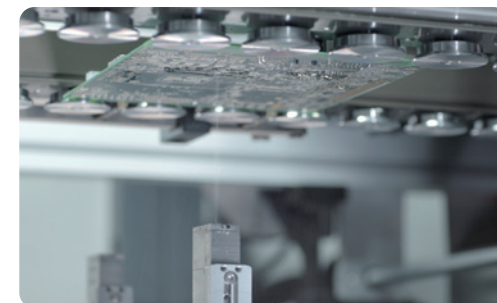
选择性波峰焊在松香喷雾模组可以配置2个独立喷雾模块；可以满足产品喷雾时间及松香类型的应用；具有喷雾测试功能和流量水平监测的精密喷雾通量系统。

Two independent spray modules can be configured for selective wave soldering in rosin spray module; It can meet the application of product spray time and rosin type; Precise spray flux system with spray test function and flow level monitoring.

产品特点

Product features

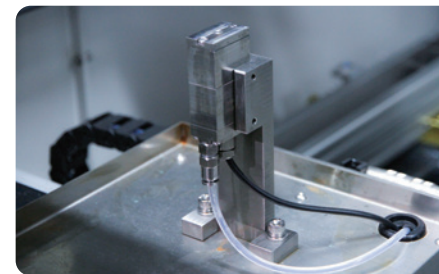
- XY 轴伺服马达驱动控制系统
- 喷雾宽度: 2~8 mm (直径 130 μ m 喷嘴)
- 可编程点喷和线喷
- 选项: 松香堵塞检测
- XY axis servo motor drive control system
- Spray width: 2~8 mm (diameter 130 μ M nozzle)
- Programmable point spray and line spray
- Option: rosin blockage detection



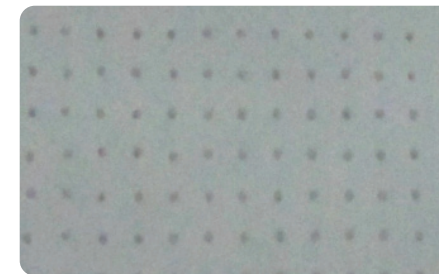
高精度助焊剂喷涂
High precision flux spraying

相关硬件

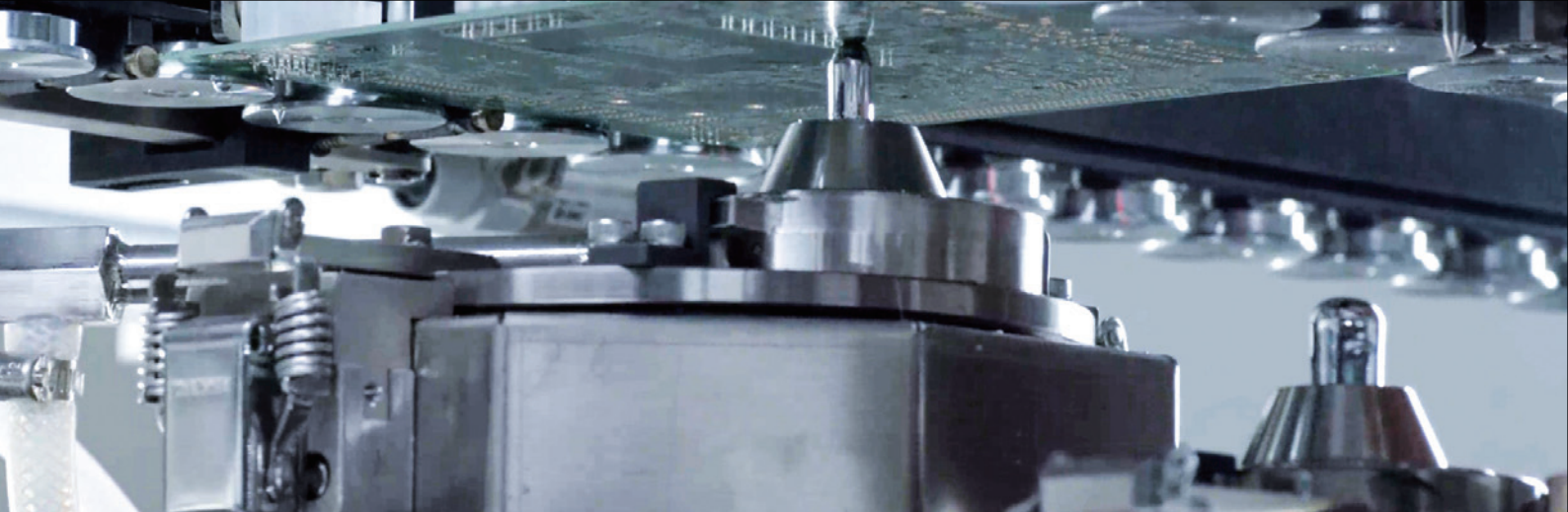
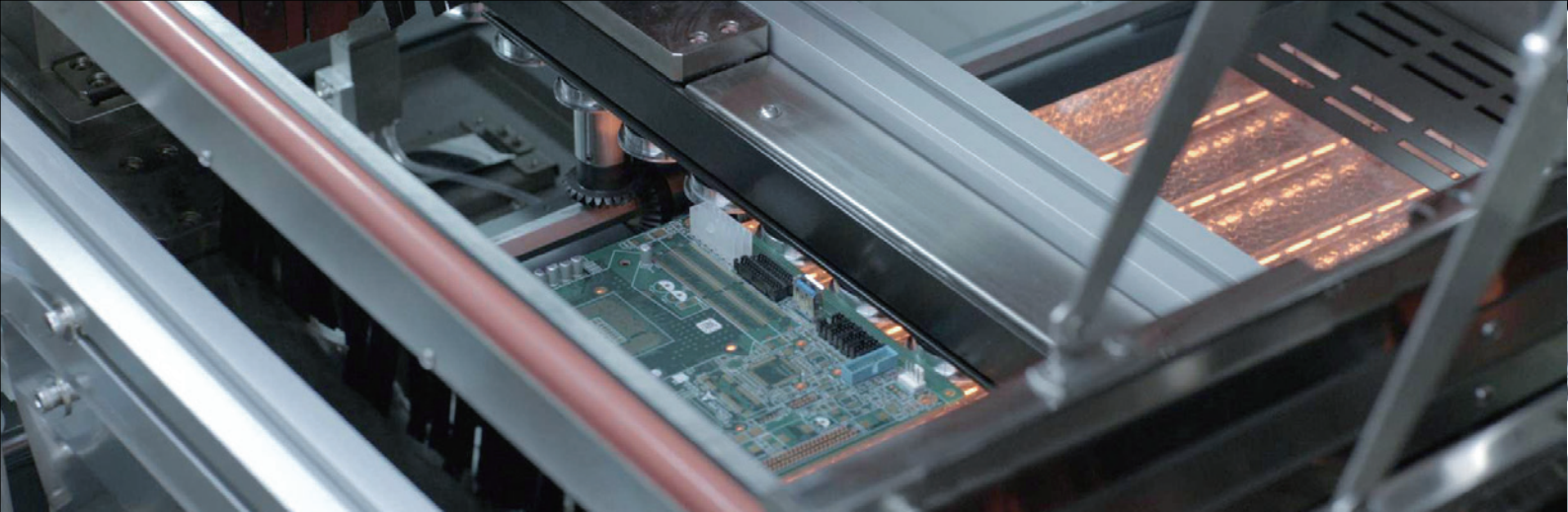
Related hardware



高精度脉冲喷雾系统
High precision pulse spray system



热敏纸喷雾效果展示
Thermal paper spray effect display



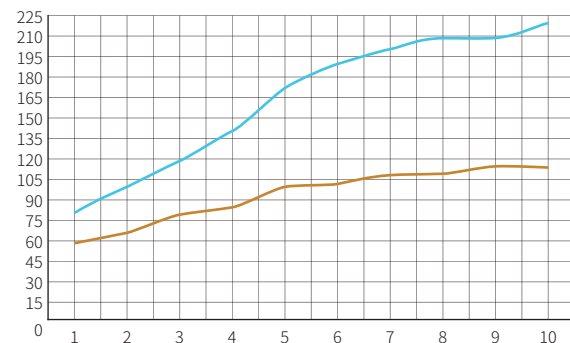
预热模块系统 Preheating Module System

预热模组主要配置顶部热风 and 底部红外线发热器外;对于PTH复杂工艺PCB还配置功率加热模式;以确保高效、安全和均匀的加热效果。

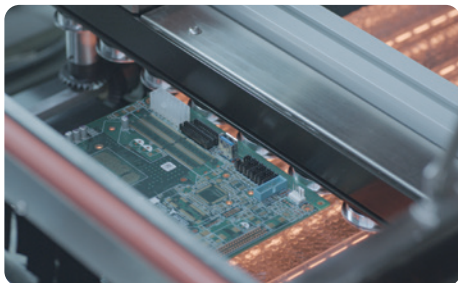
The preheating module is mainly equipped with top hot air and bottom infrared heater; For PTH complex process PCB, power heating mode is also configured; To ensure efficient, safe and uniform heating effect.

产品特点 Product features

- 底部红外线预热
- 顶部热风对流预热
- 高效加热, 迅速加热PCB板;
- 底部动态预热和顶部热风预热组合, 预热区分段控制系统发挥最大的能效比
- Bottom infrared preheating
- Top hot air convection preheating
- Efficient heating, rapid heating of PCB boards
- The combination of bottom dynamic preheating and top hot air preheating maximizes the energy efficiency of the preheating zone segmented control system



相关硬件 Related hardware



底部红外线预热
Bottom infrared preheating



顶部热风对流预热
Top hot air convection preheating

焊接模块系统 Welding Module System

焊接模组采用电磁泵驱动方式;选择性波峰焊最多可以配置3焊接模块;每个模块配置双锡缸对应更大产能需求。

The welding module is driven by an electromagnetic pump; Selective wave soldering can be configured with up to 3 welding modules; Each module is equipped with dual tin cylinders corresponding to larger production capacity requirements.

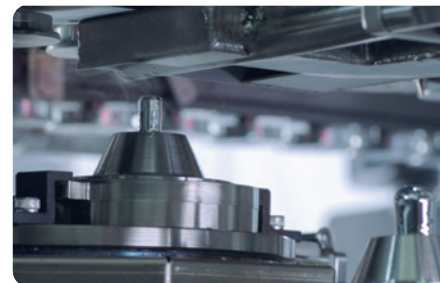
产品特点 Product features

- 电磁驱动控制波峰系统, 稳定的波峰状态
- X/Y/Z 3轴伺服控制系统, 可靠的定位精度
- 定制化锡嘴, 满足不同客户的定制化需求和工艺标准
- 氮气保护, 保证焊接持久可靠
- Electromagnetic drive control peak system, stable peak state;
- X/Y/Z 3-axis servo control system, reliable positioning accuracy;
- Customized solder tips to meet the customized needs and process standards of different customers;
- Nitrogen protection ensures durable and reliable welding.



双缸异步电磁泵
Double cylinder asynchronous electromagnetic pump

相关硬件 Related hardware



自动清洗喷嘴 (选项)
Automatic cleaning nozzle (option)



波峰自动校正 (标准)
Automatic crest correction (standard)



自动加锡 (选项)
Automatic wire feeder (option)

软件编程系统 Practical Device Hardware

新软件界面在编程方面也更加便捷,参数和工艺图像一目了然,为每个单独的焊接工艺提供最佳控制。

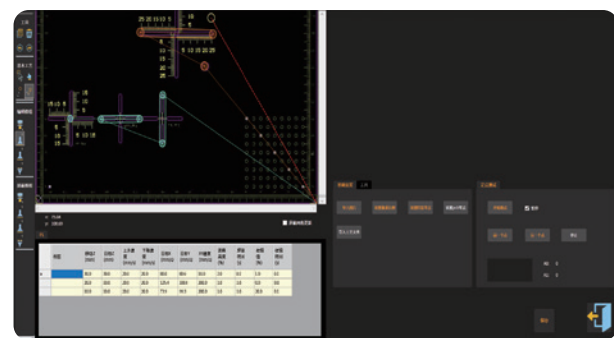
The new software interface is also more convenient in programming, The parameters and process images are clear at a glance, providing the best control for each individual welding process.

产品特点 Product features

- 灵活的编程方式 (图片、Gerber)
 - Mark 相机编程 (选项)
 - 人性化的操作系统
 - 工艺参数灵活性
 - 智能化控制模块 (选配)
 - 实现焊接程序精准控制
- Flexible programming methods (pictures, Gerber)
 - Mark camera programming (option)
 - Humanized operating system
 - Flexibility of process parameters
 - Intelligent control module (optional)
 - Achieve precise control of welding procedures

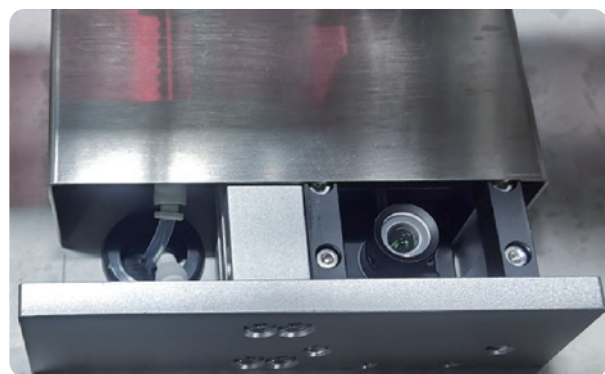


智能化控制平台
Intelligent control platform



灵活的编程界面
Flexible programming interface

相关硬件 Related hardware



编程相机
Programming Camera



Mark相机
Mark camera

设备结构 Practical Device Hardware

模块化设备组合,满足客户产能需求。

Modular equipment combination to meet customer capacity requirements.



- 喷雾模块

1050mm
- 预热模块

750mm
- 焊接模块

1100mm
- 预热模块

750mm
- 焊接模块

1350mm
- 预热模块

750mm
- 焊接模块

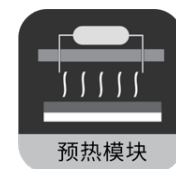
1500mm



单头喷雾
Single spray nozzle



双头喷雾
Double spray nozzle



预热模组+IR
Preheating module + IR



单缸焊接
Single soldering pot



双缸焊接(单平台模组)
Double soldering pot
(single platform module)



双缸焊接(双平台模组)
Double soldering pot
(double platform module)



JES系列选择性波峰焊参数

JES Series Selective Wave Soldering Parameters

型号	Model	JES-450	JES-610
外型尺寸	Dimension (L×W×H)	2600×1825×1650mm	3350×1985×1650mm
颜色	Colour	波纹白/亮条纹灰 Corrugated White/Chrysanthemum Grey	
PCB运输方向	PCB transportation direction	左向右 Left to Right (选项 Option: 右向左 Right to Left)	
重量	Weight	1500kg	2200kg
控制系统 Control System			
电源	Power Supply	3P5W, 380VAC 50/60Hz	
总功率	Consumption	29KW / 44A	38KW / 58A
控制方式	Control mode	PC+PLC	
PC操作系统	PC Operating System	Windows 10	
远程可视化	Process Visualization	CCD 可视 visibility	
软件语言	Software Language	中英文切换 Switching between Chinese and English	
数据导入	Data Import	支持制程数据上传 Support process data upload (选项 Option:配置条码枪 configure barcode gun)	
编程方式	Programming Mode	在线/离线编程 Online/offline programming	
编程类型	Programming Type	Gerber;图像编程 Image programming (选项 Option:配置编程相机 Configure programmed cameras)	
传输系统 Transmission system			
传送带离地高度	Height of conveyor belt	900±20mm	
PCB运输角度	PCB transportation angle	0°	
传送带速度	Conveyor speed	0.2-10m/min	
托盘/PCB重量	PCB Weight	Max:8kg	
PCB宽度(单轨)	PCB Width (Monorail)	60-450mm	60-610mm
PCB长度	PCB Length	120-500mm	120-700mm
PCB顶部空间	PCB Top Space	120mm	
PCB底部空间	PCB Bottom Space	Max:60mm	
PCB厚度	PCB thickness	0.5-3.0mm	
PCB工艺边	PCB Edge Size	≥4mm	
PCB Pin 脚间距	PCB Pin Pin Spacing	≥0.8mm	
焊盘与贴片间距	Pad to Patch Spacing	≥1.0mm 中心偏移方式 Center Offset Method	
调宽精度	Width adjustment accuracy	±0.2mm	
运输/调宽方式	Transport/width adjustment	链条+转盘&分段运输&统一调宽 Chain+turntable & Segmented transportation & Unified width adjustment	
助焊剂模块 Flux module			
运动形式	Form of movement	XY 平台运动 Platform Motion	
助焊剂储存罐	Flux storage tank	2L - 20L	
定位速度	Location Speed	0-400mm/s	
喷雾速度	Spray speed	0-20mm/s	
喷雾定位精度	Spray positioning accuracy	±0.15mm	
助焊剂种类	Type of flux	免洗型/水基型 Free Wash/Water Based	
助焊剂低液位检测	Low flux level detection	低液位自动报警 Automatic low level alarm	
喷雾驱动方式	Spray driving mode	高频电磁阀 High frequency solenoid valve	
喷雾喷嘴数量	Number of spray nozzles	单喷嘴 Single nozzle	

型号	Model	JES-450	JES-610
助焊剂模块 Flux module			
喷雾喷头管大小	The Size of Flux Nozzle Tube	130um	
喷涂宽度	Flux Width	2-8mm	
喷雾工作压力	Working pressure of spray	0.05Mpa~0.1MPa	
预热模块 Preheating Module			
预热有效面积	Preheating effective area	L500*W450mm	L700*W610mm
顶部预热方式	Top preheating method	热风对流 Hot air convection	
顶部热风加热器功率	Top hot air heater power	Max:5KW	Max:7KW
底部预热方式	Bottom preheating method	红外线辐射 Infrared radiation	
底部红外发热器功率	Bottom infrared heater power	Max:13.5kw	Max:18kw
控温方式	Temperature control	PID+SSR/功率模式 Power mode	
温度范围	Temperature range	温室 Greenhouse - 250℃	
焊接模块 Welding Module			
焊接区预热	Welding Zone Preheating	选项 Option	
PCB定位方式	PCB positioning method	机械定位 Mechanical positioning (选项 Option: MARK相机定位 Camera positioning)	
运动形式	Form of movement	XYZ 平台运动 Platform Motion	
波峰驱动方式	Wave crest driving mode	电磁泵 Electromagnetic pump	
锡缸数量	Number of tin cylinders	单焊接模块单缸单头 Single welding module, single cylinder, single head	
焊接喷嘴	Welding nozzle	定制单点高精度喷嘴 Single point high-precision nozzle (选项 Option: 自动清洗喷嘴功能 Automatic cleaning nozzle function)	
喷嘴波峰高度	Nozzle crest height	3~5mm	
喷嘴焊接速度	Nozzle welding speed	2-20mm/s	
平台移动速度	Platform movement speed	X/Y: 2-200mm/s ; Z: 2-100mm/s	
平台定位精度	Platform positioning accuracy	±0.15mm	
锡缸加热功率	Heating power of tin cylinder	2.3KW	
锡缸控温精度	Temperature control accuracy	±2℃	
气体供应要求 Gas Supply Requirements			
氮气压力	Nitrogen pressure	0.5Mpa-0.8Mpa	
氮气压力低报警	Low nitrogen pressure alarm	压力传感器 Pressure sensor	
氮气消耗量	Nitrogen consumption	每个锡缸消耗约 Each tin cylinder consumes about 1.0~1.5m³/h	
粒子洁净度	Particle cleanliness	≥99.999%	
压缩空气压力	Compressed air pressure	0.5Mpa-0.8Mpa	
空气压力低报警	Low air pressure alarm	压力传感器 Pressure sensor	
消耗量	Consumption	≤10m³/h	
机器排风 Machine Exhaust			
排风管直径	Exhaust duct diameter	φ200mm	
排风管排风量	Exhaust air volume	360-900m³/h (3个) (选项 Option: 排风检测系统 Exhaust air detection system)	
环境温度	Ambient temperature	15-35℃	
噪音等级	Noise level	<70dB(A)	
安全紧急制	Safety emergency system	4Pcs (选项 Option: 安全门防护开关 Safety door protection switch)	

备注：参数若有更改, 恕不另行通知! The above contents are subject to change without further notice!



JNS系列选择性波峰焊参数

JNS Series Selective Wave Soldering Parameters

型号	Model	JNS-450	JNS-610
外型尺寸	Dimension (L×W×H)	2600×1800×1650mm	3350×1985×1650mm
颜色	Colour	波纹白/亮条纹灰 Corrugated White/Chrysanthemum Grey	
PCB运输方向	PCB transportation direction	左向右 Left to Right (选项 Option: 右向左 Right to Left)	
重量	Weight	1500kg	2200kg
控制系统 Control System			
电源	Power Supply	3P5W, 380VAC 50/60Hz	
总功率	Consumption	35KW / 53A	45KW / 68A
控制方式	Control mode	PC+PLC	
PC操作系统	PC Operating System	Windows 10	
远程可视化	Process Visualization	CCD 可视 visibility	
软件语言	Software Language	中英文切换 Switching between Chinese and English	
数据导入	Data Import	支持制程数据上传 Support process data upload (选项 Option:配置条码枪 configure barcode gun)	
编程方式	Programming Mode	在线/离线编程 Online/offline programming	
编程类型	Programming Type	Gerber;图像编程 Image programming (选项 Option:配置编程相机 Configure programmed cameras)	
传输系统 Transmission system			
传送带离地高度	Height of conveyor belt	900±20mm	
PCB运输角度	PCB transportation angle	0°	
传送带速度	Conveyor speed	0.2-10m/min	
托盘/PCB重量	PCB Weight	Max:8kg	
PCB宽度(单轨)	PCB Width (Monorail)	60-450mm	60-610mm
PCB长度	PCB Length	120-500mm	120-700mm
PCB顶部空间	PCB Top Space	Max:120mm	
PCB底部空间	PCB Bottom Space	Max:60mm	
PCB厚度	PCB thickness	0.5-3.0mm	
PCB工艺边	PCB Edge Size	≥4mm	
PCB Pin 脚间距	PCB Pin Pin Spacing	≥0.8mm	
焊盘与贴片间距	Pad to Patch Spacing	≥1.0mm 中心偏移方式 Center Offset Method	
调宽精度	Width adjustment accuracy	±0.2mm	
运输/调宽方式	Transport/width adjustment	全转盘&分段运输&统一调宽 Full turntable & Segmented transportation & Unified width adjustment	
助焊剂模块 Flux module			
运动形式	Form of movement	XY 平台运动 Platform Motion	
助焊剂储存罐	Flux storage tank	2L	
定位速度	Location Speed	0-400mm/s	
喷雾速度	Spray speed	0-20mm/s	
喷雾定位精度	Spray positioning accuracy	皮带: ±0.15mm / 丝杆: ±0.05mm	
助焊剂种类	Type of flux	免洗型/水基型 Free Wash/Water Based	
助焊剂低液位检测	Low flux level detection	低液位自动报警 Automatic low level alarm	
喷雾驱动方式	Spray driving mode	高频电磁阀 High frequency solenoid valve	
喷雾喷嘴数量	Number of spray nozzles	单喷嘴 Single nozzle	

型号	Model	JNS-450	JNS-610
助焊剂模块 Flux module			
喷雾喷头管大小	The Size of Flux Nozzle Tube	130um	
喷涂宽度	Flux Width	2-8mm	
喷雾工作压力	Working pressure of spray	0.05Mpa~0.1MPa	
预热模块 Preheating Module			
预热有效面积	Preheating effective area	L500*W450mm	L700*W610mm
顶部预热方式	Top preheating method	热风对流 Hot air convection	
顶部热风加热器功率	Top hot air heater power	Max:5KW	Max:7KW
底部预热方式	Bottom preheating method	红外线辐射 Infrared radiation	
底部红外发热器功率	Bottom infrared heater power	Max:13.5kw	Max:18kw
控温方式	Temperature control	PID+SSR/功率模式 Power mode	
温度范围	Temperature range	温室 Greenhouse - 250℃	
焊接模块 Welding Module			
焊接区预热	Welding Zone Preheating	标配 Standard	
PCB定位方式	PCB positioning method	机械定位 Mechanical positioning (选项 Option: MARK相机定位 Camera positioning)	
运动形式	Form of movement	XYZ 平台运动 Platform Motion	
波峰驱动方式	Wave crest driving mode	电磁泵 Electromagnetic pump	
锡缸数量	Number of tin cylinders	单焊接模块单缸单头 Single welding module, single cylinder, single head	
焊接喷嘴	Welding nozzle	定制单点高精度喷嘴 Single point high-precision nozzle (选项 Option: 自动清洗喷嘴功能 Automatic cleaning nozzle function)	
喷嘴波峰高度	Nozzle crest height	3~5mm	
喷嘴焊接速度	Nozzle welding speed	2-20mm/s	
平台移动速度	Platform movement speed	X/Y: 2-200mm/s ; Z: 2-100mm/s	
平台定位精度	Platform positioning accuracy	皮带: ±0.15mm / 丝杆: ±0.05mm	
锡缸加热功率	Heating power of tin cylinder	2.3KW	
锡缸控温精度	Temperature control accuracy	±2℃	
气体供应要求 Gas Supply Requirements			
氮气压力	Nitrogen pressure	0.5Mpa-0.8Mpa	
氮气压力低报警	Low nitrogen pressure alarm	压力传感器 Pressure sensor	
氮气消耗量	Nitrogen consumption	每个锡缸消耗约 Each tin cylinder consumes about 1.0~1.5m³/h	
粒子洁净度	Particle cleanliness	≥99.999%	
压缩空气压力	Compressed air pressure	0.5Mpa-0.8Mpa	
空气压力低报警	Low air pressure alarm	压力传感器 Pressure sensor	
消耗量	Consumption	≤10m³/h	
机器排风 Machine Exhaust			
排风管直径	Exhaust duct diameter	φ200mm	
排风管排风量	Exhaust air volume	360-900m³/h (3个) (选项 Option: 排风检测系统 Exhaust air detection system)	
环境温度	Ambient temperature	15-35℃	
噪音等级	Noise level	<70dB(A)	
安全紧急制	Safety emergency system	4Pcs (选项 Option: 安全门防护开关 Safety door protection switch)	

备注：参数若有更改, 恕不另行通知! The above contents are subject to change without further notice!



JMS-400H



JMS-300/450

产品描述
Practical Device Hardware

- 焊接自动化
Welding automation
• 双面板元件的焊接实现完全自动化。
• The welding of double-sided panel components is fully automated.

- 波峰喷口
Crest spout
• 波峰喷口移动速度可调，喷头定位精准，在线监控波峰及自动校正功能。
• The movement speed of the wave peak nozzle is adjustable, the nozzle positioning is accurate, and the wave peak height and self frequency correction function are monitored on the machine.

- 软件升级
Software upgrade
• 无需任何PCB数据，依旧可快速导入数据，且图形编程简易、高效采用选择性喷雾，多种算法相结合，精确控制喷雾过程，保证PCB的清洁，大幅度降低助焊剂的耗量；
• 可离机式编程/Gerber文件导入。
• Without any PCB data, data can still be quickly imported, and the graphic programming is simple and efficient. Selective spray is used. Multiple algorithms are combined to accurately control the spray process, ensure the cleanness of PCB, and greatly reduce the consumption of flux;
• Offline programming/Gerber file import is possible.

- 红外线加热
Infrared heating
• 分上下独立控温，采用红外线加热以提高加热效率及温度的均匀性。
• Separate upper and lower temperature control, using infrared heating to improve heating efficiency and temperature uniformity.

- CCD可视
CCD visibility
• 焊接过程CCD可视，全程质量跟踪。
• The welding process is visible with CCD, and the whole process quality is tracked.

迷你选择焊参数
Mini-Selective Soldering Parameters

型号	Model	JMS-400H	JMS-300	JMS-450
外形尺寸	Dimension (L×W×H)	1650×1825×1650mm	800×1400×1400mm	1000×1680×1400mm
PCB 宽度	PCB Width	60-400 mm	60-300 mm	60-450 mm
PCB 长度	PCB Length	120-400 mm	120-330 mm	120-530 mm
PCB顶部空间	PCB Top Side Clearance	Max.120 mm		
PCB底部空间	PCB Bottom Side Clearance	Min.50 mm	Min.30 mm	
PCB工艺边尺寸	PCB Edge Clearance	4 mm		
PCB运输高度	Conveyor Height	900±20		
PCB运输速度	Conveying speed	0.2-10M/min		
托盘/PCB重量	Pallet/PCB weight	Max:5kg		
助焊剂储存罐	Flux Capacity	2L		
喷雾喷头管口大小	The Size of Flux Nozzle Tube	130μm(双喷雾头选配) (Double Nozzle is option)	130μm	130μm(双喷雾头选配) (Double Nozzle is option)
喷涂宽度	Flux Width	2-8mm		
底部动态红外发热器	Bottom Dynamic Infrared Heater	Max:9KW	—	
温度范围	Temperature Range	室温 R T~250℃	—	
顶部热风加热器	Top Air Heater	Max:5KW	—	
最小喷嘴直径	Min Diameter of Solder Nozzle	Φ2.5/4		
波峰高度	Wave Height	Max.5mm		
锡炉容量	Solder Pot Capacity	8KG/pot		
焊接温度	Soldering Temperature	Max:350℃		
加热时间	Heating Time	40min / (300℃)		
锡炉加热功率	Pot Heating Power	1KW / 单缸 Single pot		
定位速度	Location Speed	X / Y : 2-200mm/s Z : 2-50mm/s		
焊接精度	Soldering Accuraey	±0.15mm		
PC操作系统	PC Operating System	Windows 10		
远程可视化	Process Visualization	CCD 可视 Visual		
软件语言	Software Language	中英文可切换 Chinese and English Changeable		
数据导入	Data Import	Gerber、图像导入 Image Import		
编程方式	Programming Mode	在线/离线编程 Inline/Offline Programming		
电源&频率	Power Supply	AC,380V 3Φ5W 50/60Hz		
总功耗	Consumption	22KW	4.5KW	5.5KW
排风管直径	Air Duct Diameter	Φ200mm		Φ150mm
排风管排风量	Exhaust Air Rate	360 M³ / h		
所需压力	Pressure	0.4-0.8 Mpa		
氮气消耗量	N2 Consumption	每个锡缸消耗约 Each onsumes about 1.0~1.5 M³ / h		
N2浓度	Concentration	≥99.999%		

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自动修补整线

Automatic repair of the entire line



THT智能解决方案

THT Smart Solutions



*可按客户不同需求配置最合适方案
*The most suitable solution can be configured according to the different needs of customers