



-成为AI赋能工艺的装备引领者-

BECOME THE EQUIPMENT LEADER OF AI ENABLING PROCESS



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JIANGSU XINMAIWEI TECHNOLOGY GROUP CO., LTD

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# XMW GROUP

人工智能成就工业新未来

ARTIFICIAL INTELLIGENCE IS THE NEW FUTURE OF INDUSTRY



专注于PCBA生产过程的视觉检测与焊接

Focus on PCBA production process visual inspection and welding

# 江苏鑫迈维科技集团有限公司

JIANGSU XINMAIWEI TECHNOLOGY GROUP CO., LTD

# ABOUT XMW

江苏鑫迈维科技集团有限公司是集智能设备研发、生产及服务于一体的技术服务型企业，专注于PCBA生产过程的视觉检测、焊接，为客户提供各种光学检测，SMT焊接方案。始终坚持自主研发和自主创新的发展路线，将AI应用到AOI光学检测、SMT焊接产品中。以深度学习算法为核心，采集了行业亿万级别的数据样本进行产品模型训练，使其具有智能极简编程、一键自动识别、智能判定不良、低误报率等特点，解决了传统AOI编程时间长、误报率高的痛点，落地赋能企业降本增效。发展过程中，鑫迈维科技集团将继续秉承创新精神，加大研发投入，推动智能装备技术的不断进步，与全球电子制造业伙伴携手共进，让人工智能成就工业新未来。

Jiangsu Xinmaiwei Technology Group Co., Ltd. is a technical service enterprise integrating research and development, production and service of intelligent equipment, focusing on visual inspection and welding of PCBA produc on process, providing customers with various optical inspection and SMT welding solutions. We always adhere to the development line of independent research and development and independent innovation, and apply AI to AOI optical inspection and SMT welding products. With deep learning algorithm as the core, it collected hundreds of millions of data samples of the industry for product model training, so that it has intelligent minimal programming, one-click automatic recognition, poor intelligent judgment, low false positive rate and other characteristics, solving the traditional AOI programming time is long, high false positive rate of pain points, enabling enterprises to reduce costs and increase efficiency. In the process of development, Xinmaiwei Technology Group will continue to uphold the spirit of innovation, increase investment in research and development, promote the continuous progress of intelligent equipment technology, and work together with global electronics manufacturing partners to make artificial intelligence the new future of industry.



XMW 鑫迈维

# 发展历程

HISTORY //

**2023-2024**

**高速发展 RAPID EDVELOPMENT**

- 检测系列设备、焊接系列设备销售2000家+
- Testing series equipment, welding series of accumulated equipment sales of 2000 +

**2021-2022**

**规模化扩张 SCALE EXPANSION**

- 检测设备投入大批量产
- 焊接设备全新迭代
- 40000m<sup>2</sup>智能制造产业园投入使用
- Testing equipment into mass production
- New iteration of welding equipment
- 40000m<sup>2</sup> intelligent manufacturing Industrial park was put into use

**2019-2020**

**RAPID GROWTH 快速成长**

- 荣获高新技术企业
- 成立产学研一体化学院
- 落地40000m<sup>2</sup>制造产业园项目
- 2020年鑫迈维集团成立
- Won the high-tech enterprise
- The Institute of industry-University-research integration was established
- Landed 40000m<sup>2</sup> manufacturing industrial park project
- In 2020, XinMaiwei Group was established

**2014**

**SET UP 成立**

- 启动焊接设备研发
- 启动检测设备研发
- 2014年公司正式成立
- Start welding equipment research and development
- Start the research and development of testing equipment
- In 2014, the company was officially established

**2015-2018**

**发展 DEVELOP**

- 与500家企业达成合作
- 陆续成立安徽、浙江、深圳、山东办事处
- 产品获得多项创新成果奖
- Reached cooperation with 500 enterprises
- Set up Anhui, Zhejiang, Shenzhen, Shandong offices
- Products won a number of innovation achievement awards

产品型号：S1/S1-D/S1-L

**在线PCBA锡膏3D光学检测设备**

检测印刷少锡、多锡、厚度等锡膏缺陷，运用相位调制轮廓测量技术实现对精密印刷焊锡膏的三维测量，在保证高速测量的同时，大幅度的提高测量精度

To detect the defects of printing tin, more tin and thickness, use the phase modulation contour measurement technology to realize the three-dimensional measurement of precision printing solder paste, ensure the high-speed measurement, and greatly improve the measurement accuracy

**技术优势**

极简编程，便捷操作，可实现多机互联  
AI intelligent algorithm, one-click search and positioning, programming is fast and simple



可配合印刷机实现闭环功能  
It can cooperate with the printing press to achieve the closed-loop function



实现实时SPC监控及分析  
Realize real-time SPC monitoring and analysis



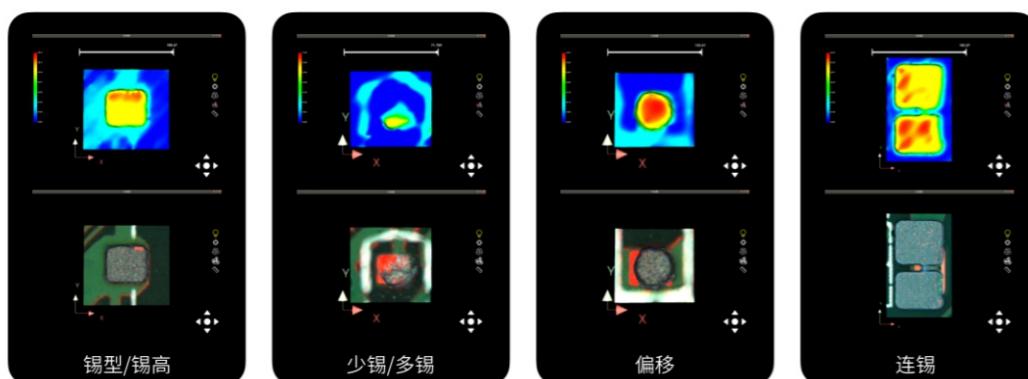
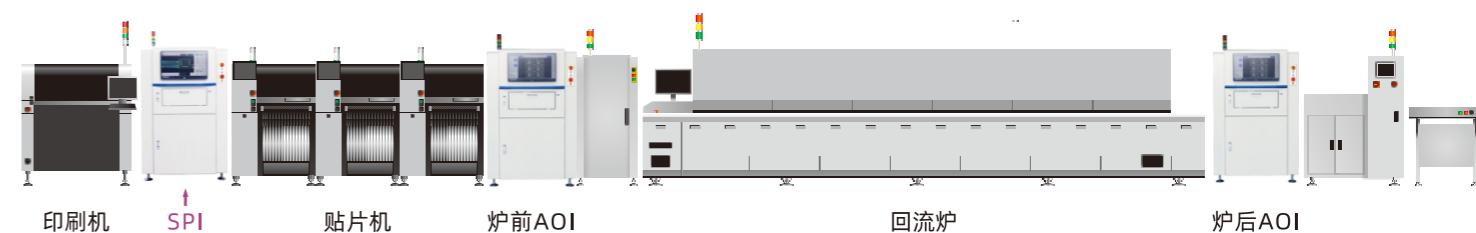
三点照合  
three-point according



坏板飞行识别功能及&贴片机BadMark点的共享功能  
Bad board flight identification function and the sharing function of BadMark points



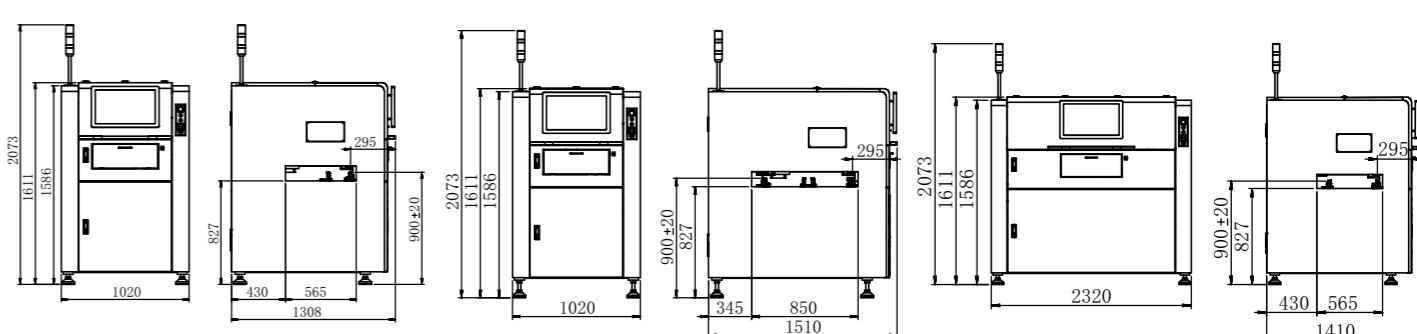
支持整板图形存储  
Support panel graphics

**检测示例****产线方案****SMT段印刷机后****规格参数**

型号 TYPE	S1	S1-D	S1-L
尺寸 SIZE	50x50mm-510x460mm	50x50mm-510x275mm/510x600mm	50x50mm-1200x460mm
厚度 thickness	0.5mm-6mm	0.5mm-6mm	0.5mm-6mm
元件高度 Component height	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm
工艺边 Process side	3mm		
相机 camera	5MP彩色面阵高速工业相机 5MP color face array high-speed industrial camera		
光源 illuminant	RGB+W四色积分光源+单方向结构光投影单元 RGB + W four-color integral light source + single-direction structure light projection unit	RGB+W四色积分光源+多方向结构光投影单元 RGB + W four-color integral light source + multi-directional structure light projection unit (optional)	
分辨率 resolution	15um		
FOV	15um@36*30mm		
焊锡检测 Welding tin detection	锡高、多锡、少锡、偏移、拉尖、连锡、锡型、共面性等 Tin high, more than tin, less tin, offset, pull tip, even tin, tin type, coplanar, etc		
条码识别 Barcode identification	一维/二维码识别/字符识别等 1D / QR code identification / character recognition, etc		
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call		
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别等 Deep neural network algorithm, image contrast, color contrast, contour recognition, etc		
速度 speed	0.3sec/FOV		
功能 function	远程控制、远程协助、gerber文件导入、自定义模型训练 Remote control, remote assistance, gerber file import, and custom model training		
通讯方式 communication mode	标准SMEMA接口 Standard SMEMA interface		
数据输出 presentation of data	自动生成统计分析SPC Automatically generate the statistical analysis SPC		
主机 host computer	工控主机 Industrial control computer		
显示器 indicator	24寸FHD indicator显示器		
运动机构 gear	高精度丝杆+伺服电机 High-precision wire rod + servo motor		
轨道调宽 Track adjustment	手动/自动 Manual / automatic		
机箱尺寸及重量 Case size and weight	1020x1308x1611mm (不含三色灯) 约760KG	1020x1510x1611mm (不含三色灯) 约1100KG	2320x1410x1611mm (不含三色灯) 约1200KG
电源及功率 power	AC 220V, 额定功率 power rating 2KVA	AC 220V, 额定功率 power rating 2.5KVA	AC 220V, 额定功率 power rating 2.5KVA
气源 air supply	0.4-0.6Mpa		
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH		

**设备尺寸**

(单位: mm)



产品型号：S1/S1-D/S1-L

产品型号：S2/S2-D/S2-L

**在线PCBA贴片2D光学检测设备**

检测贴片元件及焊锡缺陷，通过高精度彩色工业相机实时抓取板卡图像，采取卷积神经网络算法处理图像，智能判定元器件及焊锡不良

To detect the defects of patch components and solder, grasp the board card image in real time through the high-precision color industrial camera, adopt the convolution neural network algorithm to process the images, and intelligently determine the bad components and solder

**技术优势**

精简编程流程，极简界面，一键批量修改参数  
Streamline the programming process, the minimalist interface, one-click batch modification of parameters



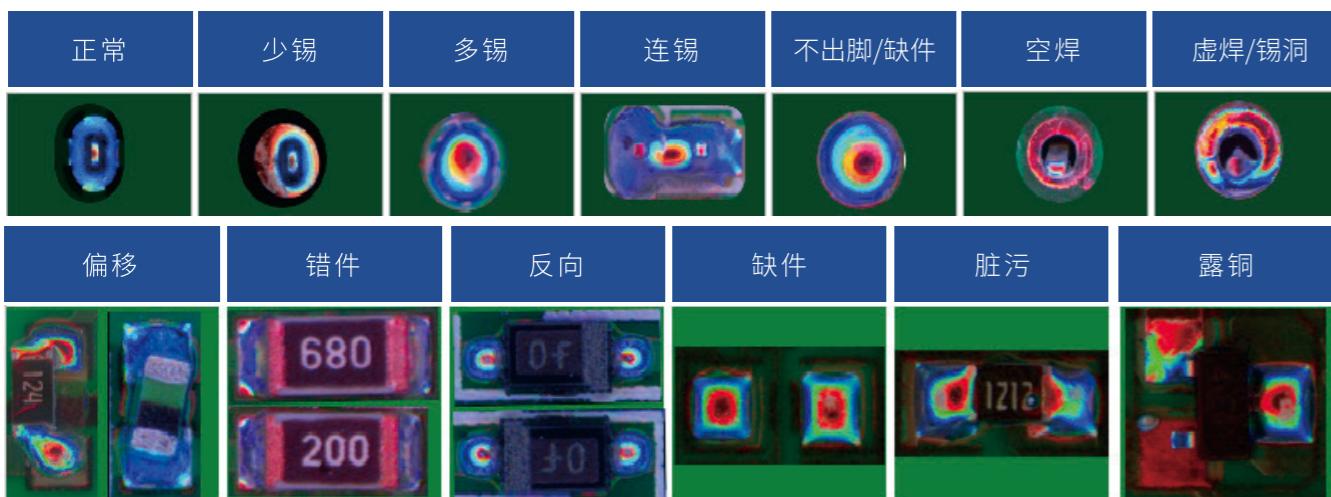
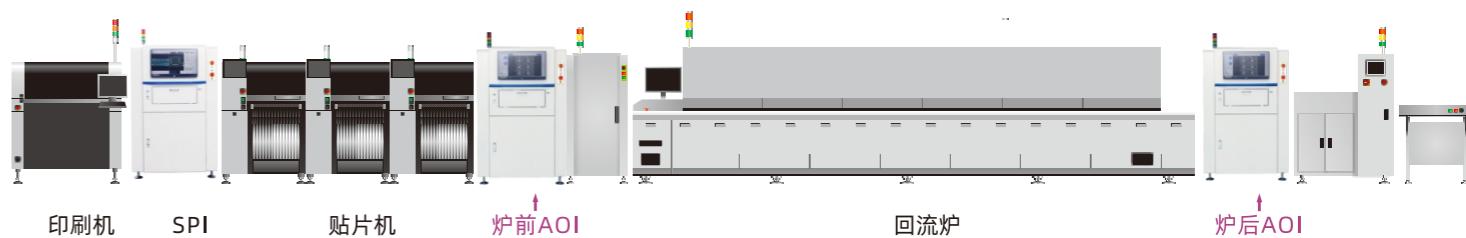
集中管控，多设备互联互通  
Centralized control and multi-device connectivity



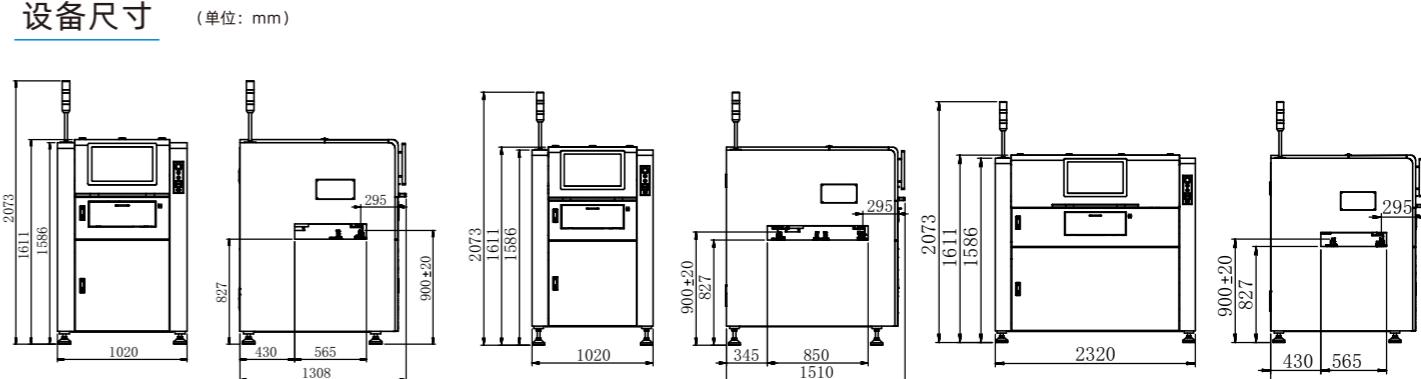
多种配置满足不同检测需求  
Multiple configurations meet different detection



数据可追溯，支持SPC报警  
Data traceability, support for SPC alarm

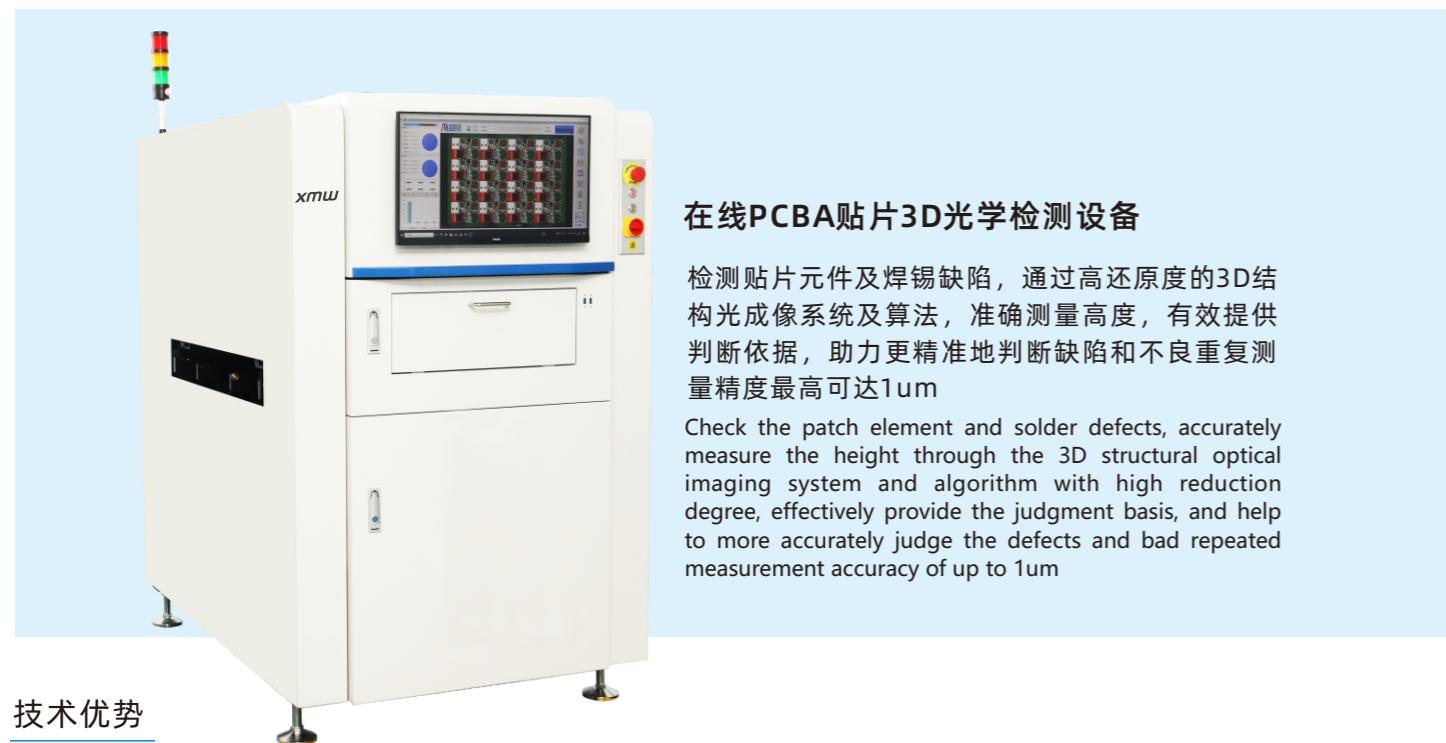
**检测示例****产线方案****规格参数**

型号 TYPE	S2	S2-D	S2-L
尺寸 SIZE	50x50mm-510x460mm	50x50mm-510x275mm/510x600mm	50x50mm-1200x460mm
厚度 thickness	0.5mm-6mm	0.5mm-6mm	0.5mm-6mm
元件高度 Component height	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm
工艺边 Process side	3mm		
相机 camera	12MP彩色面阵高速工业相机 12MP color face array high-speed industrial camera		
光源 illuminant	RGB+W四色积分光源 RGB + W four-color integral light source		
分辨率 resolution	10um/15um		
FOV	10um@40*30mm/15um@60*45mm		
元件检测 Component detection	缺件、多件、翻转、反向、偏移、破损、歪斜、异物、污损等 Missing parts, multiple pieces, flip, reverse, offset, damage, skew, foreign body, stain, etc		
焊锡检测 Welding tin detection	多锡、少锡、拉尖、连锡、空焊、虚焊、锡洞等 More tin, less tin, pull point, tin, empty welding, virtual welding, tin hole, etc		
条码识别 Barcode identification	一维/二维码识别/字符识别等 1D / QR code identification / character recognition, etc		
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call		
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别等 Deep neural network algorithm, image contrast, color contrast, contour recognition, etc		
速度 speed	0.25sec/FOV		
功能 function	远程控制、远程协助、gerber文件导入、自定义模型训练 Remote control, remote assistance, gerber file import, and custom model training		
通讯方式 communication mode	标准SMEMA接口 Standard SMEMA interface		
主机 host computer	工控主机 Industrial control computer		
显示器 indicator	24寸FHD indicator显示器		
运动机构 gear	高精度丝杆+伺服电机 High-precision wire rod + servo motor		
轨道调宽 Track adjustment	手动/自动 Manual / automatic		
机箱尺寸及重量 Case size and weight	1020x1308x1611mm (不含三色灯), 约760KG	1020x1510x1611mm (不含三色灯), 约900KG	2320x1410x1611mm (不含三色灯), 约1200KG
电源及功率 power	AC 220V, 额定功率power rating 2kVA	AC 220V, 额定功率power rating 2.5kVA	AC 220V, 额定功率power rating 3kVA
气源 air supply	0.4-0.6Mpa		
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH		

**设备尺寸**

产品型号：S2/S2-D/S2-L

产品型号：S3/S3-D/S3-L



### 在线PCBA贴片3D光学检测设备

检测贴片元件及焊锡缺陷，通过高还原度的3D结构光成像系统及算法，准确测量高度，有效提供判断依据，助力更精准地判断缺陷和不良重复测量精度最高可达1um

Check the patch element and solder defects, accurately measure the height through the 3D structural optical imaging system and algorithm with high reduction degree, effectively provide the judgment basis, and help to more accurately judge the defects and bad repeated measurement accuracy of up to 1um

### 技术优势



#### 高速、高精度

高速，高分辨率图像处理技术，高效提升2D检测性能和3D成像速度；基于4/8方向的投影3D成像，最小化阴影问题

High speed, high resolution image processing technology, efficient 2D inspection

Measurement performance and the 3D imaging speed This was based on projected 3D imaging in the 4 / 8 orientation to minimize the shading problem



#### 极简编程

深度学习算法，基于大数据训练智能模型一键查找已训练器件，可快速批量广播参数实现快速编程和运行，制版流程简单易学

Deep learning algorithm, training the intelligent model based on big data One key to find the trained devices, can quickly batch broadcast parameters Realize fast programming and operation, and the plate-making process is simple and easy to learn



#### 检测范围广

测量高度范围可配置2D、3D均可检测

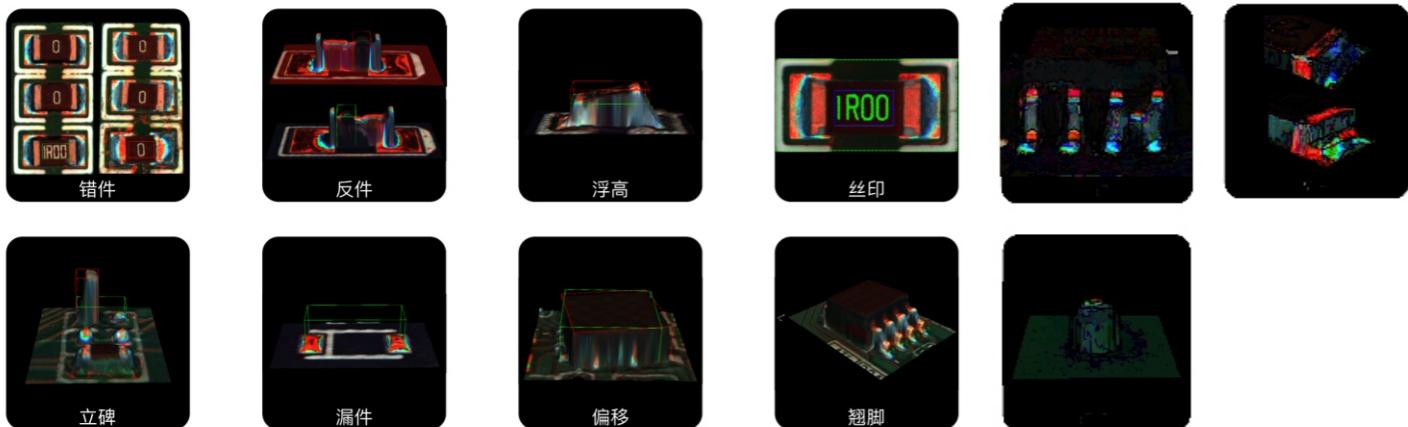
The measurement height range is configurable Both 2D and 3D are detectable storage

#### SPC全面直观

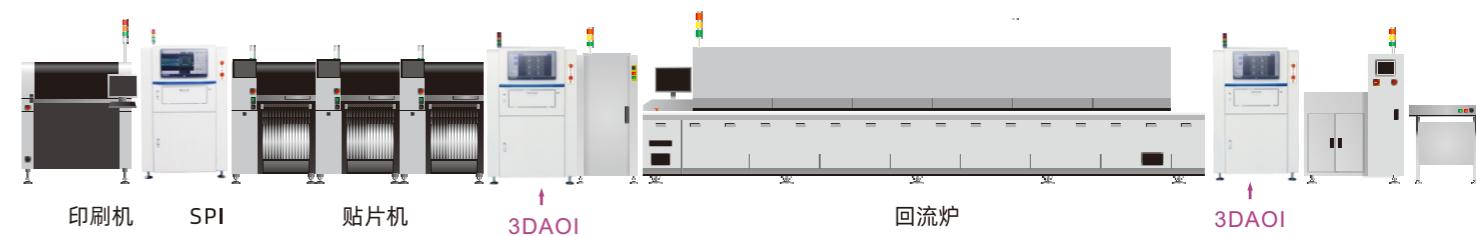
自动识别条码快速查询生产统计报表，远程查看追踪数据

Automatic identification of bar code, quick query of production statistics report, View the trace data remotely

### 检测示例



### 产线方案

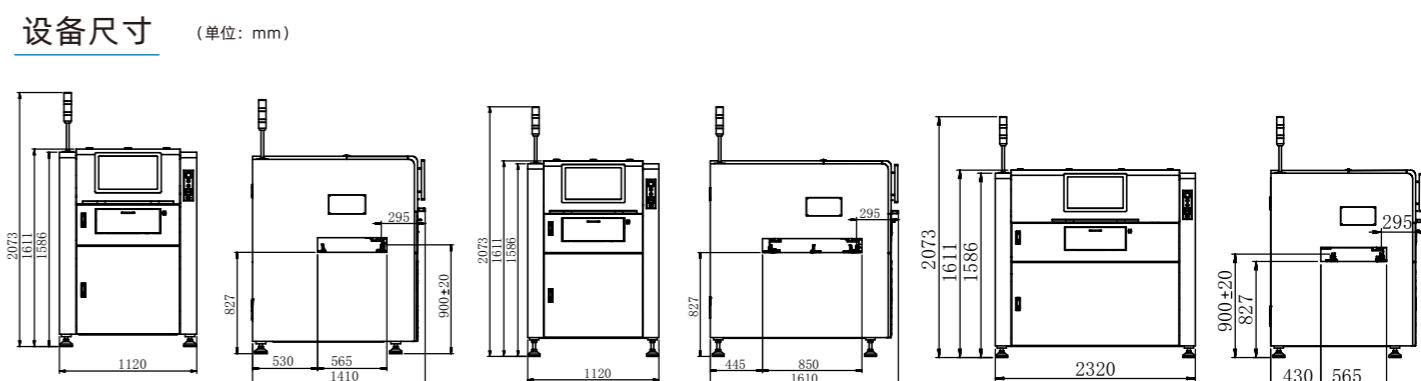


### SMT段回流焊前+后

### 规格参数

型号 TYPE	S3	S3-D	S3-L
尺寸 SIZE	50x50mm-510x460mm	50x50mm-510x275mm/510x600mm	50x50mm-1200x460mm
厚度 thickness	0.5mm-6mm	0.5mm-6mm	0.5mm-6mm
元件高度 Component height	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm	上端: 40mm, 底面: 40mm
工艺边 Process side	3mm		
相机 camera	12MP彩色面阵高速工业相机 12MP color face array high-speed industrial camera		
光源 illuminant	RGB+W四色积分光源+4方向结构光投影单元 RGB + W four-color integral light source + 4-direction structured light projection unit		
分辨率 resolution	10um/15um		
FOV	10um@40*30mm/15um@60*45mm		
元件检测 Component detection	翘脚、浮高、立碑、缺件、多件、翻转、反向、偏移、破损、歪斜、异物、污损等 Cross feet, floating high, monument, missing parts, many pieces, flip, reverse, offset, damage, skew, foreign body, dirt, etc		
焊锡检测 Welding tin detection	焊锡高度、多锡、少锡、连锡、空焊、虚焊、锡洞等 Welder height, more tin, less tin, tin, empty welding, virtual welding, tin hole, etc		
条码识别 Barcode identification	一维/二维码识别/字符识别等 1D / QR code identification / character recognition, etc		
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call		
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别等 Deep neural network algorithm, image contrast, color contrast, contour recognition, etc		
速度 speed	0.55sec/FOV		
功能 function	远程控制、远程协助、gerber文件导入、自定义模型训练 Remote control, remote assistance, gerber file import, and custom model training		
通讯方式 communication mode	标准SMEMA接口 Standard SMEMA interface		
主机 host computer	工控主机 Industrial control computer		
显示器 indicator	24寸FHD indicator显示器		
运动机构 gear	高精度丝杆+伺服电机 High-precision wire rod + servo motor		
轨道调宽 Track adjustment	手动/自动 Manual / automatic		
机箱尺寸及重量 Case size and weight	1120x1410x1611mm (不含三色灯), 约880KG	1120x1610x1611mm (不含三色灯), 约1100KG	2320x1410x1611mm (不含三色灯), 约1250KG
电源及功率 power	AC 220V, 额定功率 power rating 2kVA	AC 220V, 额定功率 power rating 2.5kVA	AC 220V, 额定功率 power rating 2.5kVA
气源 air supply	0.4-0.6Mpa		
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH		

### 设备尺寸



产品型号：S3/S3-D/S3-L

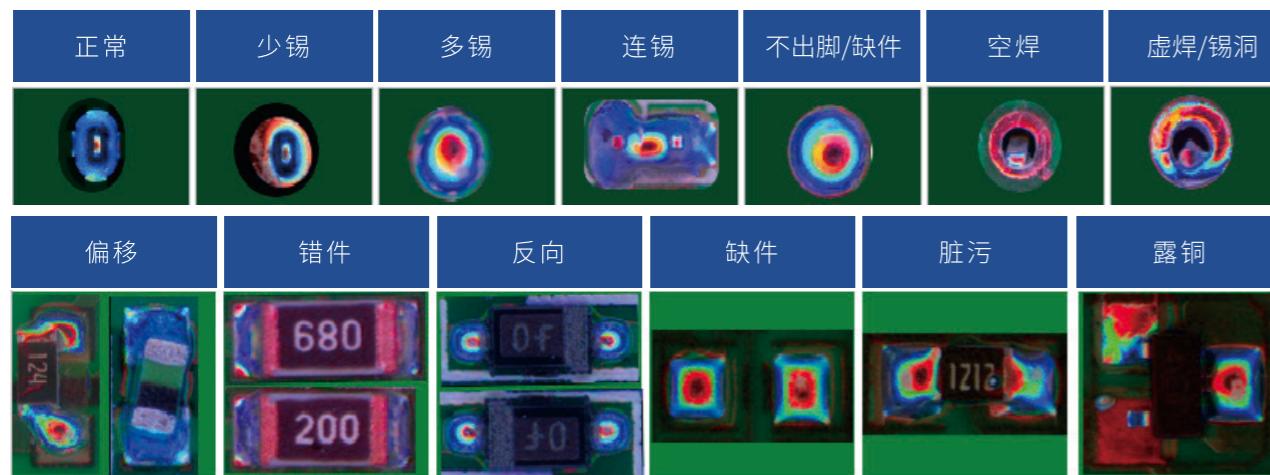
产品型号：SD



### 技术优势

	精简编程流程，极简界面，一键批量修改参数 Streamline the programming process, the minimalist interface, one-click batch modification of parameters
	远心镜头，低畸变、高景深、全像素 far-hear t lens, low distortion, high depth of field, full pixel
	强大抗干扰能力，高检出率，低误报率 Strong anti-interference ability, high detection rate, low false alarm rate

### 检测示例



### 一机多能

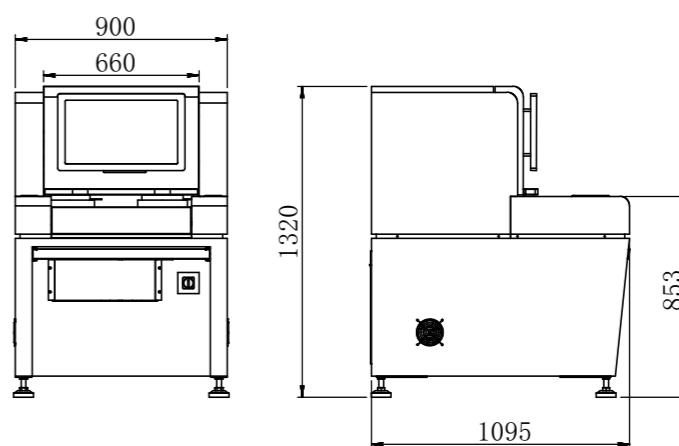


### 规格参数

型号 TYPE	SD
尺寸 size	50x50mm-440x320mm
厚度 thickness	0.5mm-5mm
相机 camera	SMP彩色面阵高速工业相机 SMP color face array high-speed industrial camera
光源 illuminant	RGB LED 环形光源
FOV&分辨率 resolution ratio	15um@36mm*30mm/10um@25mm*20mm
元件检测 Component detection	多锡、少锡、连锡、缺件、偏移、歪斜、立碑、反件、极反、错件、破损 More tin, less tin, even tin, missing parts, offset, skew, monument, reverse parts, extreme reverse, wrong parts, damaged
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 模板匹配等 Deep neural network algorithm, image contrast, color contrast, template matching, etc
功能 function	远程控制、远程协助、CAD、自定义模型训练 Remote control, remote assistance, CAD, and custom model training
轨道调整方式 Track adjustment	手动 Manual
显示器 indicator	24寸FHD显示器
机箱尺寸及重量 Size and weight	900x1095x1320mm, 约300KG
电源及功率 power	AC 220V, 额定功率 power rating 1.6KVA
气源 air supply	0.4-0.6Mpa
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH

### 设备尺寸

(单位: mm)



产品型号：D1/D1-W

**在线式PCBA插件光学检测设备**

检测DIP元件的错漏反等缺陷,通过高精度彩色工业相机实时抓取板卡图像,采取卷积神经网络算法处理图像,智能判定元器件不良

To detect the errors and omissions of DIP elements, grasp the board image in real time by the high-precision color industrial camera, adopt the convolutional neural network algorithm to process the images, and intelligently determine the bad components

**技术优势**

极简编程,便捷操作,支持在线/离线多种编程方式  
Minimalist programming, convenient operation, support online / offline



详细数据测试报表,支持SPC报警  
Detailed data test report, to support SPC alarm



多种检测模式,适应生产多样性  
Multiple detection modes, adapted to the production



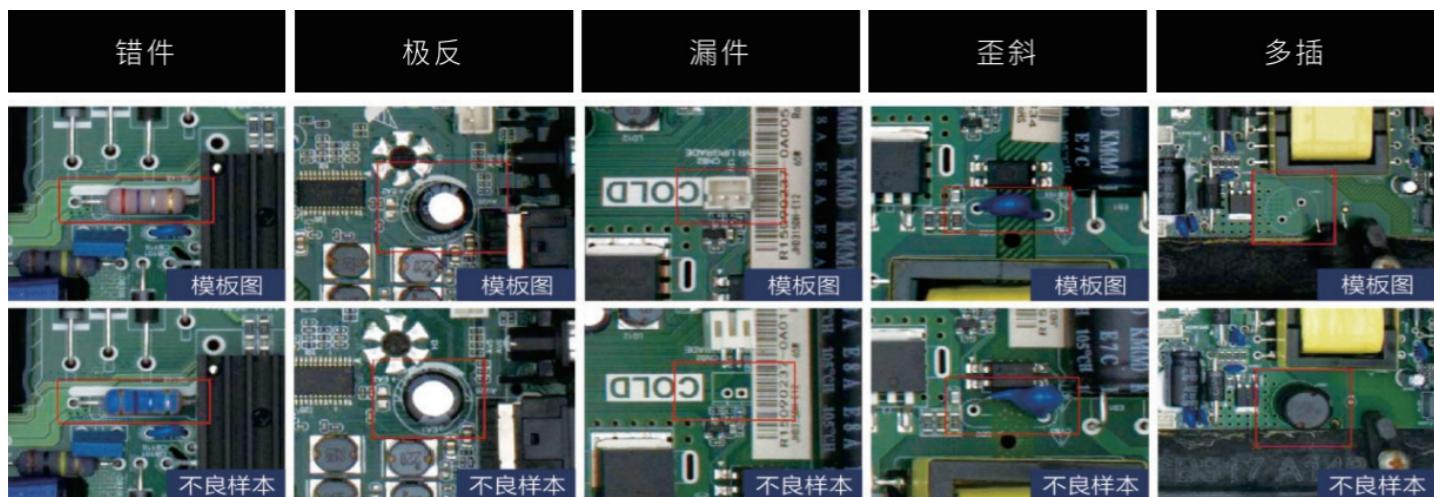
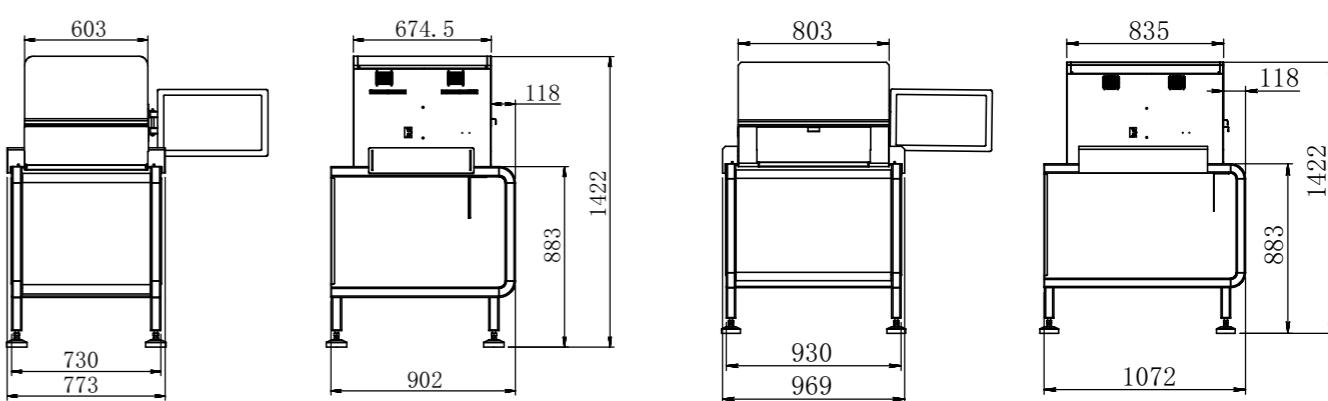
可搭配选配项,快速定位不良,实现产线控制  
Can be matched with optional items, fast positioning is bad, to achieve

**产线方案**

DIP段波峰焊前

**规格参数**

型号 TYPE	D1	D1-W
尺寸 size	250×350mm	400×400mm
厚度 thickness	0.5mm-6mm	0.5mm-6mm
相机 camera	12MP彩色工业相机 12MP colour industrial camera	25MP彩色工业相机 25MP colour industrial camera
光源 illuminant	高均匀开孔前景LED冷白光 High-uniform hole-opening foreground LED cold white light	
FOV&分辨率 resolution ratio	85um@250×350mm	115um@400×400mm
元件检测 Component detection	插件元器件的缺件、反件、多插、歪斜、小颗粒特征错件、丝印文字识别、条码扫描等 Missing parts of plug-in components, anti-parts, multiple insert, skew, small particle characteristic wrong parts, screen mark text recognition, bar code scanning, etc	
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call 深度神经网络算法, 图像对比, 颜色对比, 模板匹配, OCR等 Deep neural network algorithm, image contrast, color contrast, template matching, OCR, etc	
算法 algorithm		
功能 function	远程控制、远程协助、CAD、自定义模型训练 Remote control, remote assistance, CAD, and custom model training	
显示器 indicator	21寸FHD显示器 21 inch FHD monitor	
机箱尺寸及重量 Size and weight	773×902×1422mm, 约150KG	969×1072×1422mm, 约200KG
电源及功率 power	AC 220V, 额定功率 power rating 0.5KVA	
气源 air supply	0.4-0.6Mpa	
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH	

**检测示例****设备尺寸** (单位: mm)

产品型号：D1/D1-W

产品型号：D2



### 在线 PCBA 焊锡光学检测设备

检测错漏反及焊锡等缺陷，通过高精度彩色工业相机实时抓取板卡图像，采取卷积神经网络算法处理图像，智能判定元器件不良。

To detect defects such as reverse and solder, grasp the plate-card image in real time by high-precision color industrial camera, adopt the convolution neural network algorithm to process the image, and intelligently determine the bad components.

### 技术优势

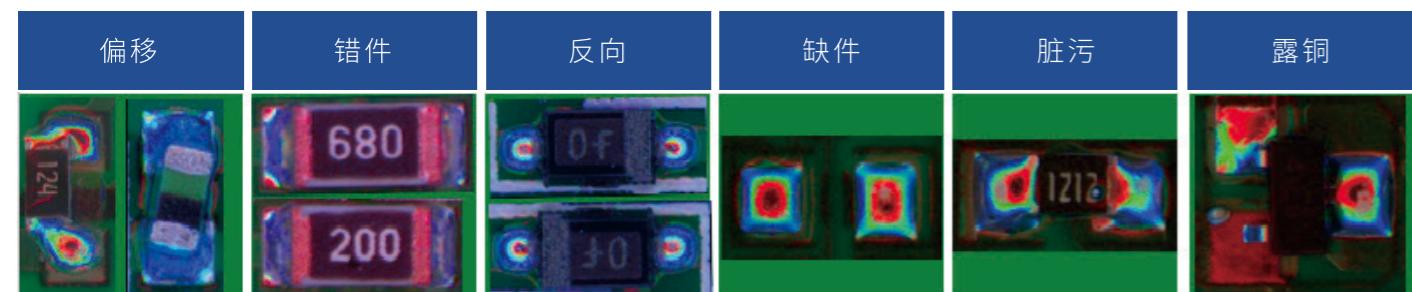
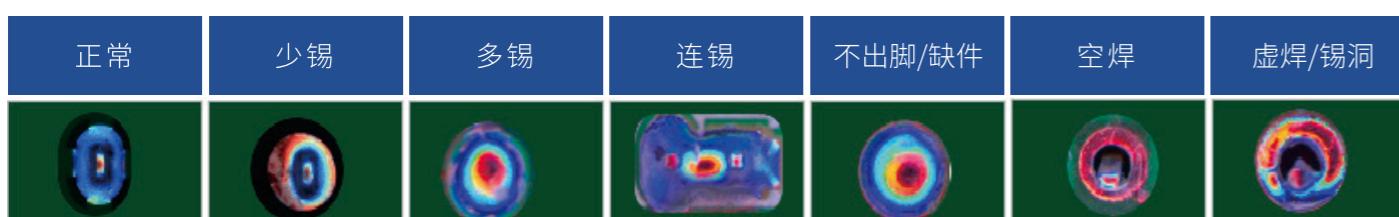


AI 智能算法，一键搜索定位，编程快速简单  
AI intelligent algorithm, one-click search and positioning, programming is fast and simple



在线/离线编程，不停线即可优化调整设备参数  
Online programming: the equipment parameters can be optimized and adjusted

### 检测示例



### 产线方案

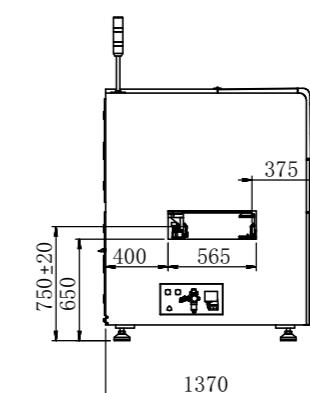
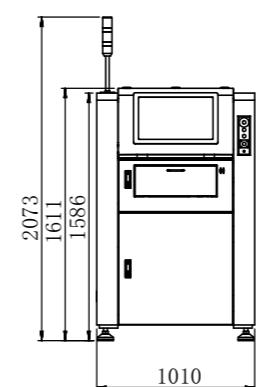
DIP 段波峰焊后



### 规格参数

型号 TYPE	D2
尺寸 SIZE	50x50mm-510x400mm
厚度 thickness	0.5mm-6mm
元件高度 Component height	上端Top: 90mm, 底面bottom: 60mm
工艺边 Process side	5mm
相机 camera	下相机: 12MP彩色面阵高速工业相机 12MP color face array high-speed industrial camera
光源 illuminant	RGB+W四色环形LED光源 RGB + W four-color ring LED light source
分辨率 resolution	15um
FOV	15um@36*30mm
元件检测 Component detection	贴片元件的漏件、反件、偏移、破损、多件、异物、污损等Leak, reverse, offset, damage, multiple, foreign body, defacing of patch elements, etc
焊锡检测 Welding tin detection	多锡、少锡、连锡、不出脚、空焊、虚焊/锡洞等 More tin, less tin, tin, not out of the foot, empty welding, virtual welding / tin hole, etc
条码识别 Barcode identification	一维/二维码识别/字符识别等 1 D / QR code identification / character recognition, etc
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别等 Deep neural network algorithm, image contrast, color contrast, contour recognition, etc
速度 speed	0.25sec/FOV
功能 function	远程控制、远程协助、gerber文件导入、自定义模型训练 Remote control, remote assistance, gerber file import, and custom model training
通讯方式 communication mode	标准SMEMA接口 Standard SMEMA interface
数据输出 presentation of data	自动生成统计分析SPC Automatically generate the statistical analysis SPC
主机 host computer	工控主机 Industrial control computer
显示器 indicator	24寸FHD indicator显示器
运动机构 gear	高精度丝杆+伺服电机 High-precision wire rod + servo motor
轨道调宽 Track adjustment	手动/自动 Manual / automatic
机箱尺寸及重量 Case size and weight	1010x1370x1611 mm 约780KG
电源及功率 power	AC 220V, 额定功率power rating 2KVA
气源 air supply	0.4-0.6Mpa
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH

### 设备尺寸 (单位: mm)



下照式

产品型号：D3



### 在线 PCBA 焊锡光学检测设备

检测 T/B 双面错漏反及焊锡等缺陷，通过高精度彩色工业相机实时抓取板卡图像，采取卷积神经网络算法处理图像，智能判定元器件不良。

Through the high-precision color industrial camera grasps the card image in real time, and the convolution neural network algorithm is adopted to process the image, intelligently determining the components are bad

### 技术优势

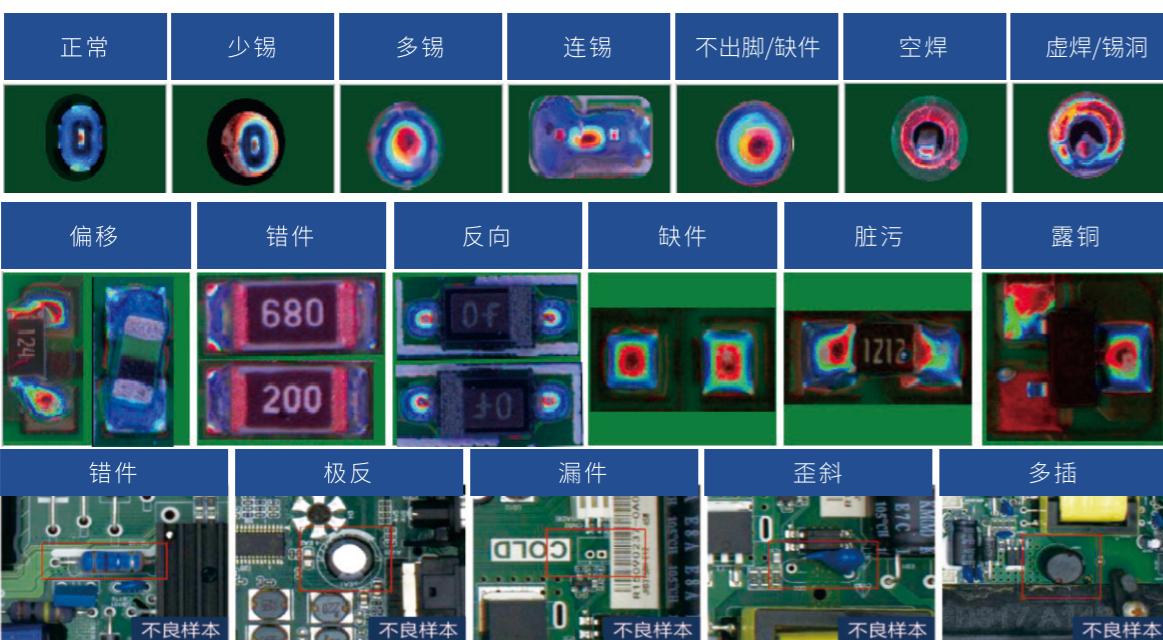


AI 智能算法，一键搜索定位，编程快速简单  
AI intelligent algorithm, one-click search and positioning, programming is fast and simple



在线/离线编程，不停线即可优化调整设备参数  
Online programming: the equipment parameters can be optimized and adjusted

### 检测示例



### 产线方案

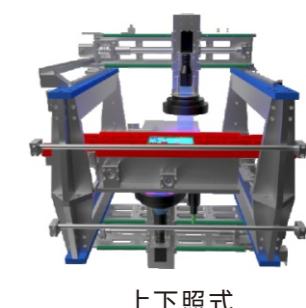
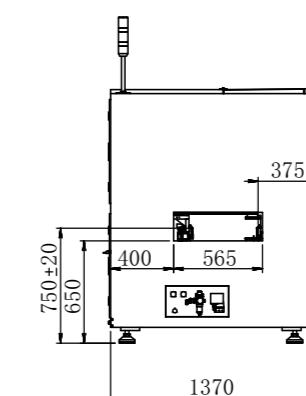
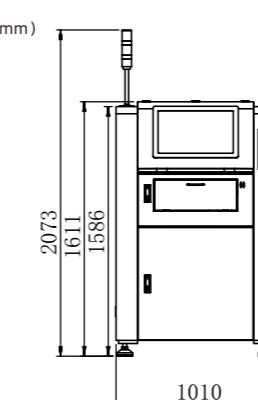
DIP 段波峰焊后/包装前终检



### 规格参数

型号 TYPE	D3
尺寸 SIZE	50x50mm-510x400mm
厚度 thickness	0.5mm-6mm
元件高度 Component height	上端Top: 60mm, 底面bottom: 60mm
工艺边 Process side	5mm
相机 camera	上下相机: 12MP彩色面阵高速工业相机 L&U 12MP color face array high-speed industrial camera
光源 illuminant	上下光源RGB+W四色环形LED光源 L&U RGB + W four-color ring LED light source
分辨率 resolution	10um/15um
FOV	10um@40*30mm(选配apolegamy) /15um@60*45mm
插件元件检测 Component detection	插件元件的漏件、反件、偏移、破损、多件、异物、污损等Leak, reverse, offset, damage, multiple, foreign body, defacing of patch elements, etc
焊锡检测 Welding tin detection	多锡、少锡、连锡、不出脚、空焊、虚焊/锡洞等 More tin, less tin, tin, not out of the foot, empty welding, virtual welding / tin hole, etc
贴片检测 Surface element detection	缺件、多件、翻转、反向、偏移、破损、歪斜、异物、污损等 Missing parts, multiple pieces, flip, reverse, offset, damage, skew, foreign body, stain, etc
条码识别 Barcode identification	一维/二维码识别/字符识别等 1 D / QR code identification / character recognition, etc
混板测试 Mixed board test	混板生产, 支持程序自动调用 Mixed board production, support program automatically call
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别等 Deep neural network algorithm, image contrast, color contrast, contour recognition, etc
速度 speed	0.25sec/FOV
功能 function	远程控制、远程协助、gerber文件导入、自定义模型训练 Remote control, remote assistance, gerber file import, and custom model training
通讯方式 communication mode	标准SMEMA接口 Standard SMEMA interface
数据输出 presentation of data	自动生成统计分析SPC Automatically generate the statistical analysis SPC
主机 host computer	工控主机 Industrial control computer
显示器 indicator	24寸FHD indicator 显示器
运动机构 gear	高精度丝杆+伺服电机 High-precision wire rod + servo motor
轨道调宽 Track adjustment	手动/自动 Manual / automatic
机箱尺寸及重量 Case size and weight	1010x1370x1611 mm 约880KG
电源及功率 power	AC 220V, 额定功率power rating 2.5KVA
气源 air supply	0.4-0.6Mpa
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH

### 设备尺寸



产品型号：D4



### 在线PCBA涂覆光学检测设备

检测PCBA在涂覆中造成的多胶少胶及飞溅散点，通过高精度彩色工业相机实时抓取板卡图像，采用卷积神经网络算法处理图像，智能判定涂覆不良。

Check the polyglue and splash scatter points caused by PCBA in the coating, grasp the board card image in real time through the high-precision color industrial camera, use the convolution neural network algorithm to process the image, and intelligently determine the poor coating.

### 技术优势

MES数据统计数据可追溯  
The MES data statistics are traceable

简单架设快速改造  
Simple erection and rapid transformation

软件支持全自动流水线控制  
The software supports fully automatic pipeline control

检测区域编辑：支持圆形、矩形、多边形  
Detection area editor: support round, rectangular, polygon

检测区域操作：复制、镜像、阵列  
Detection area operation: copy, mirror, array

辅助功能：Mark定位、胶宽检测  
Auxiliary function: Mark positioning, glue width detection

### 检测示例



多胶  
面积检测多胶

少胶  
面积检测少胶

飞溅/散点  
涂覆区域外有零星胶点

### 产线方案

涂覆固化炉后

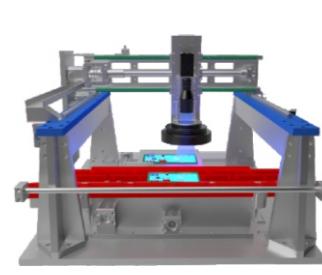
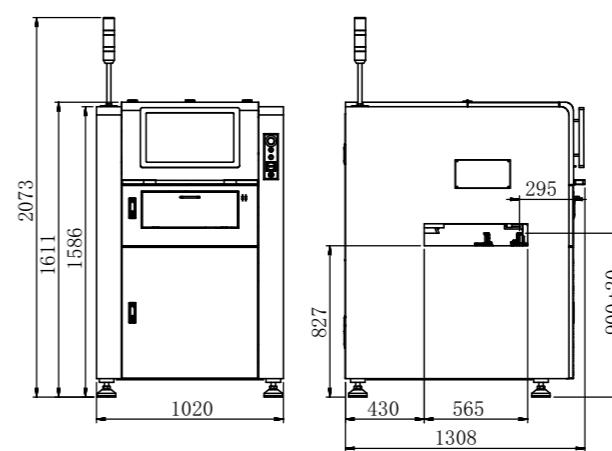


### 规格参数

型号 TYPE	D4
尺寸 SIZE	50x50mm-510x460mm
厚度 thickness	0.5mm-6mm
轨道高度 orbit altitude	900mm
可过板卡负载 Card load	≤3KG (皮带 leather belt)
元件高度 Component height	顶面top: 40, 底面bottom: 40mm
工艺边 Process side	3mm
相机 camera	5MP彩色面阵高速工业相机 5 MP color face array high-speed industrial camera
光源 illuminant	UV+W光源
FOV	10um#28mm*21mm、20um#30mm*36mm
涂覆检测 coating detection	UV胶、多涂少涂、飞溅、散点 UV glue, more and less coating, splash, scatter
算法 algorithm	深度神经网络算法, 图像对比, 颜色对比, 轮廓识别, OCR等Deep neural network algorithms, image contrast, color contrast, contour recognition, OCR, etc
速度 speed	0.3sec/FOV
功能 function	远程控制、远程协助、CAD、自定义模型训练 Remote control, remote assistance, CAD, and custom model training
轨道调宽 Track adjustment	手动/自动 Manual / automatic
显示器 indicator	24寸FHD显示器
机箱尺寸及重量 Case size and weight	1020x1308x1611mm (不含三色灯 without three color lights), 约760KG
电源及功率 power	AC 220V, 额定功率 power rating 2KVA
气源 air supply	0.4-0.6Mpa
工作环境 ambient temperature	温度: 10-45°C, 湿度: 30-85%RH

### 设备尺寸

(单位: mm)



上照式