

精致自动化科技
JZTECH

东莞市精致自动化科技有限公司

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专业打造具有核心竞争力的

机器视觉整体解决方案

Professionally create a machine vision overall solution with core competitiveness



东莞市精致自动化科技有限公司

DONGGUAN JINGZHI AUTOMATION TECHNOLOGY CO., LTD.

中国·广东

关于我们 /About us

东莞市精致自动化科技有限公司开创于2010年，是一家专业化的高科技工业智能装备制造和技术服务商。公司立足于机器视觉和工业自动化领域，专注于机器视觉和运动控制的完美结合，全力打造视觉高端产品。专为设备制造商、大型制造企业、大型加工企业打造具有竞争力的机器视觉整体解决方案。在精致自动化，凝聚了一大批电子、自动化、机械设计、计算机及图像处理等方面的资深高科技人员，公司研发团队在机器视觉领域具有丰富的开发设计经验，为国内外众多客户提供技术可靠、稳定性佳及高附加值的产品。

Dongguan Jingzhi Automation Technology Co., Ltd. was founded in 2010, is a professional high-tech industrial intelligent equipment manufacturer and technical service provider. Based on the field of machine vision and industrial automation, the company focuses on the perfect combination of machine vision and motion control, and strives to create high-end vision products. Designed for equipment manufacturers, large-scale manufacturing enterprises, large-scale processing enterprises to create a competitive machine vision overall solution. In exquisite automation, it has gathered a large number of senior high-tech personnel in electronics, automation, mechanical design, computer and image processing. The company's R&D team has rich development and design experience in the field of machine vision, and provides reliable technology for many customers at home and abroad. Good stability and high value-added products.



精致自动化荣获国家高新技术企业称号

14 年
经验

有14年的机器视觉和工业自动化
领域研发生产经验



精致自动化申请通过近
四十多项国家专利产品



企业文化 /Company culture

企业宗旨 /Corporate purposes

科技创新、品质至上
Technological innovation, quality first

发展理念 /Development concept

专业打造具有核心竞争力的机器视觉整体解决方案
Professionally create a machine vision overall solution with core competitiveness

企业愿景 /Corporate vision

不做行业的跟随者，做技术的创新者。引领工业视觉自动化行业的未来，造世界满意的高端视觉设备。
Don't be a follower of the industry, but an innovator of technology. Leading the future of the industrial vision automation industry, creating high-end vision equipment that the world is satisfied with.

服务理念 /Service philosophy

公司秉承“科技创新、品质至上”的宗旨，从设计开发，生产制造到方案的使用，都将以专业的服务，卓越的品质和一流的质量服务客户。
The company adheres to the tenet of "Science and Technology Innovation, Quality First", from design and development, manufacturing to The use of the program will serve customers with professional services, excellent quality and first-class quality.

发展历程 /Development path

2010年

11月精致科技成立
In November, Exquisite Technology was established

2013年

精致科技多项发明专利和实用新型专利申报获批。
A number of invention patents and utility model patent applications of Fine Technology have been approved

2016年

- ▶ 精致科技成功通过国家高新技术企业培育入库评审；
- ▶ 获得多项计算机软件著作权登记证书；
- ▶ 同年受邀参加“松湖杯创新创业大赛”并取得优异成绩。
- ▶ 新增专利九项。
- ▶ Exquisite Technology successfully passed the national high-tech enterprise cultivation and storage review;
- ▶ Obtained a number of computer software copyright registration certificates;
- ▶ In the same year, he was invited to participate in the "Songhu Cup Innovation and Entrepreneurship Competition" and achieved excellent results.
- ▶ 9 new patents

2017年

- ▶ 精致科技荣获国家级高新技术企业荣誉称号；
- ▶ 公司整体实力已经位于同行业前列，公司知名度大大提升；
- ▶ 新增专利多项。
- ▶ Exquisite Technology won the honorary title of national high-tech enterprise;
- ▶ The company's overall strength has been in the forefront of the industry, and the company's reputation has been greatly improved;
- ▶ Multiple new patents.

2019年

- ▶ 成立东莞云际智汇分公司，专注服装行业设备；
- ▶ 扩大生产搬新办公大楼；
- ▶ 研发成功首台服装尺寸检测设备，并与晶苑集团达成订单，开辟服装行业全新产品线；新增专利12项。
- ▶ Established Dongguan Yunji Zhihui Branch, focusing on clothing industry equipment;
- ▶ Expand production and move to a new office building;
- ▶ Successfully developed the first garment size testing equipment, and reached an order with Crystal Group to open up a new product line in the garment industry;
- ▶ 12 new patents were added;

2020年

- ▶ 研发成功首台服装激光切割设备；
- ▶ 营业额较2019年倍增；
- ▶ 通过高新技术企业复审，荣获科技型中小企业称号。
- ▶ Successfully developed the first garment laser cutting equipment;
- ▶ Turnover doubled compared to 2019;
- ▶ Passed the review of high-tech enterprises, and won the title of small and medium-sized scientific and technological enterprises.

2021年

- ▶ 2021年营业额突破千万；
- ▶ 研发成功转盘式一体机；
- ▶ 研发成功箱包行业胶条切驳一体设备；
- ▶ 研发成功计算器多功能检测设备；新增研发专利5项。
- ▶ In 2021, the turnover will exceed 10 million;
- ▶ Successfully developed a turntable all-in-one machine;
- ▶ Successfully developed rubber strip cutting in luggage industry integrated equipment;
- ▶ Successful research and development of multi-function calculator testing equipment;
- ▶ 5 new R&D patents were added

2023年

- ▶ 研发键盘半成品、笔电键盘、鼠标检测等多元化电脑外设检测和组装设备，取得行业领先地位。
- ▶ 新增研发专利多项。
- ▶ Developing diversified computer peripheral testing and assembly equipment such as semi-finished keyboards, laptop keyboards, and mouse detection, achieving a leading position in the industry.
- ▶ Multiple new research and development patents have been added.

未来...
The future

J2TECH

荣誉资质 /Honor

精致自动化经历十几年的发展得到了客户的认可，也成了行业的先行者
并通过国家高新技术企业称号
拥有自主研发的计算机软件著作权、四十多项实用新型专利发明

After more than ten years of development, exquisite automation has been recognized by customers and has become a pioneer in the industry And passed the national high-tech enterprise title
Has self-developed computer software works, more than 40 utility model patent inventions



键盘检测设备系列

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可定制功能：侧印字符检测
Customizable function: Side print character detection

键盘AOI/ATE一体机系统 进出式多功能一体机

本设备主要检测键盘的按键功能和字符印刷缺陷的质量检测。采用进出式检测方式，一台设备可实现3倍人工组合作业的产能。

This device mainly detects the quality of keyboard button function and character printing defects. By adopting an in and out detection method, one device can achieve a production capacity of three times that of manual combination operations.

检测功能/Detection function

检测AOI功能：

1. 字符装错
2. 字符漏装
3. 字符装反
4. 误装字键
5. 镭雕字符缺陷
6. LED背光颜色错误
7. LED背光亮度过亮或过暗

检测ATE功能：

1. 按键重码
2. 按键无码
3. 按键错码
4. 按键短路
5. 按键卡键
6. 连续发码
7. PIDVID检测
8. USB及PS2接口兼容

Detect AOI function:

1. Character installation error
2. Missing characters
3. Character inversion
4. Misinstallation of character keys
5. Defects in laser engraved characters
6. LED backlight color error
7. LED backlight brightness too bright or too dark

Detect ATE function:

1. Key code duplication
2. Button without code
3. Button error code
4. Button short circuit
5. Key card key
6. Continuous coding
7. PIDVID detection
8. USB and PS2 interface compatibility

键盘AOI/ATE一体机系统 转盘三工位一体机

转盘三工位一体机设备,主要对机械键盘的ATE和AOI功能检测，如背光色彩检测、字符缺陷检测、按键功能检测等；三工位操作，一台设备可实现5倍人工组合作业的产能。

The turntable three station integrated machine equipment is mainly used for ATE and AOI function detection of mechanical keyboards, such as backlight color detection, character defect detection, button function detection, etc; Three station operation, one device can achieve 5 times the production capacity of manual combination operations.

检测功能/Detection function

检测AOI功能：

1. 字符装错
2. 字符漏装
3. 字符装反
4. 误装字键
5. 镭雕字符缺陷
6. LED背光颜色错误
7. LED背光亮度过亮或过暗

检测ATE功能：

1. 按键重码
2. 按键无码
3. 按键错码
4. 按键短路
5. 按键卡键
6. 连续发码
7. PIDVID检测
8. USB及PS2接口兼容

Detect AOI function:

1. Character installation error
2. Missing characters
3. Character inversion
4. Misinstallation of character keys
5. Defects in laser engraved characters
6. LED backlight color error
7. LED backlight brightness too bright or too dark

Detect ATE function:

1. Key code duplication
2. Button without code
3. Button error code
4. Button short circuit
5. Key card key
6. Continuous coding
7. PIDVID detection
8. USB and PS2 interface compatibility



可定制功能：侧印字符检测
Customizable function: Side print character detection

键盘AOI/ATE一体机系统 转盘两工位一体机

转盘两工位测试机,主要对机械键盘的字符缺陷检测、按键功能检测；两工位检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

The turntable two station testing machine is mainly used for character defect detection and key function detection of mechanical keyboards; Two station inspection truly achieves machine replacement, reduces quality losses caused by human factors, and effectively improves production efficiency and product quality.

检测功能/Detection function

检测AOI功能：

1. 字符装错
2. 字符漏装
3. 字符装反
4. 误装字键
5. 镭雕字符缺陷
6. LED背光颜色错误
7. LED背光亮度过亮或过暗

检测ATE功能：

1. 按键重码
2. 按键无码
3. 按键错码
4. 按键短路
5. 按键卡键
6. 连续发码
7. PIDVID检测
8. USB及PS2接口兼容

Detect AOI function:

1. Character installation error
2. Missing characters
3. Character inversion
4. Misinstallation of character keys
5. Defects in laser engraved characters
6. LED backlight color error
7. LED backlight brightness too bright or too dark

Detect ATE function:

1. Key code duplication
2. Button without code
3. Button error code
4. Button short circuit
5. Key card key
6. Continuous coding
7. PIDVID detection
8. USB and PS2 interface compatibility

键盘AOI/ATE一体机系统 转盘四工位一体机

四工位操作，一台设备可完成键盘ATE+AOI功能检测，和轻触功能检测。

Four station operation, one device can complete keyboard ATE+AOI function detection and touch function detection.

检测功能/Detection function

检测AOI功能：

1. 字符装错
2. 字符漏装
3. 字符装反
4. 误装字键
5. 镭雕字符缺陷
6. LED背光颜色错误
7. LED背光亮度过亮或过暗

检测ATE功能：

1. 按键重码
2. 按键无码
3. 按键错码
4. 按键短路
5. 按键卡键
6. 连续发码
7. PIDVID检测
8. USB及PS2接口兼容

Detect AOI function:

1. Character installation error
2. Missing characters
3. Character inversion
4. Misinstallation of character keys
5. Defects in laser engraved characters
6. LED backlight color error
7. LED backlight brightness too bright or too dark

Detect ATE function:

1. Key code duplication
2. Button without code
3. Button error code
4. Button short circuit
5. Key card key
6. Continuous coding
7. PIDVID detection
8. USB and PS2 interface compatibility

轻触检测功能：

1. 检测产品灵敏度

Touch detection function:

1. Testing product sensitivity



可定制功能：侧印字符检测
Customizable function: Side print character detection



键盘AOI系列
柜式键盘AOI

本设备对薄膜键盘、机械键盘、笔记本键盘字符印刷工艺（如丝印镭雕等）缺陷检测，和镭雕字符未透澈、LED背光功能检测。

This device is used to detect defects in the character printing process of thin film keyboards, mechanical keyboards, and notebook keyboards (such as silk screen laser engraving), as well as detecting the opacity of laser engraved characters and LED backlighting function.

检测功能/Detection function	
检测AOI功能：	Detect AOI function:
1.字符装错	1. Character installation error
2.字符漏装	2. Missing characters
3.字符装反	3. Character inversion
4.误装字键	4. Misinstallation of character keys
5.镭雕字符缺陷	5. Defects in laser engraved characters
6.LED背光颜色错误	6. LED backlight color error
7.LED背光亮度过亮或过暗	7. LED backlight brightness too bright or too dark
可定制功能：侧印字符检测 Customizable function: Side print character detection	



键盘AOI系列
流水线AOI

设备连接自动化生产流水线，检测键盘字符印刷的质量缺陷，运行快速平稳。

The equipment is connected to an automated production line, detecting quality defects in keyboard character printing, and running quickly and smoothly.

检测功能/Detection function	
检测AOI功能：	Detect AOI function:
1.字符装错	1. Character installation error
2.字符漏装	2. Missing characters
3.字符装反	3. Character inversion
4.误装字键	4. Misinstallation of character keys
5.镭雕字符缺陷	5. Defects in laser engraved characters
6.LED背光颜色错误	6. LED backlight color error
7.LED背光亮度过亮或过暗	7. LED backlight brightness too bright or too dark
可定制功能：侧印字符检测 Customizable function: Side print character detection	

键盘AOI系列
进出式AOI

本设备对薄膜键盘、机械键盘、笔记本键盘字符印刷工艺（如丝印镭雕等）缺陷检测和镭雕字符未透澈、LED背光功能检测。

This device is used for defect detection in the printing process of thin film keyboards, mechanical keyboards, and notebook keyboards (such as silk screen laser engraving), as well as detection of unclear laser engraving characters and LED backlighting function.

检测功能/Detection function	
检测AOI功能：	Detect AOI function:
1.字符装错	1. Character installation error
2.字符漏装	2. Missing characters
3.字符装反	3. Character inversion
4.误装字键	4. Misinstallation of character keys
5.镭雕字符缺陷	5. Defects in laser engraved characters
6.LED背光颜色错误	6. LED backlight color error
7.LED背光亮度过亮或过暗	7. LED backlight brightness too bright or too dark
可定制功能：侧印字符检测 Customizable function: Side print character detection	



高低Key检测设备系列
转盘3D-AOI测试机

对键盘字符印刷缺陷检测,按键组装位置识别,键帽高低差值检测,键帽高低检测（单键高度检测/单键高度差检测等）。

Detection of keyboard character printing defects, recognition of key assembly positions, detection of key cap height differences, and detection of key cap height differences (single key height detection/single key height difference detection, etc.).

检测功能/Detection function	
检测AOI功能：	Detect AOI function:
1.字符错键	1. Wrong character key
2.字符漏装	2. Missing characters
3.字符装反	3. Character inversion
4.字符镭雕缺陷	4. Defects in character laser engraving
5.LED背光颜色错误	5. LED backlight color error
6.3D检测键帽高低	6.3D detection of key cap height





高低Key检测设备系列

3D高低Key测试机

对键盘字符印刷缺陷检测,按键组装位置识别,键帽高低差值检测,键帽高低检测 (单键高度检测/单键高度差检测等)。

Detection of keyboard character printing defects, recognition of key assembly positions, detection of key cap height differences, and detection of key cap height differences (single key height detection/single key height difference detection, etc.).

检测功能/Detection function

- | | |
|--------------|---|
| 1. 字符错键 | 1. Wrong character key |
| 2. 字符漏装 | 2. Missing characters |
| 3. 字符装反 | 3. Character inversion |
| 4. 字符镭雕缺陷 | 4. Defects in character laser engraving |
| 5. LED背光颜色错误 | 5. LED backlight color error |
| 6. 3D检测键帽高低 | 6. 3D detection of key cap height |



键盘ATE

桌面键盘ATE

本设备检测机械键盘的按键功能检测,设备可以安装在自动化生产流水线上。

This device detects the key function of mechanical keyboards and can be installed on automated production lines.

检测功能/Detection function

- | | |
|----------------|--|
| 1. 按键重码 | 1. Key code duplication |
| 2. 按键无码 | 2. Button without code |
| 3. 按键错码 | 3. Button error code |
| 4. 按键短路 | 4. Button short circuit |
| 5. 按键卡键 | 5. Key card key |
| 6. 连续发码 | 6. Continuous coding |
| 7. PIDVID检测 | 7. PIDVID detection |
| 8. USB及PS2接口兼容 | 8. USB and PS2 interface compatibility |



键盘ATE

转盘双工位ATE测试机

本设备检测机械键盘的按键功能检测,转盘式双工位检测,优化了操作人员,真正实现机器换人,大大提高了工作效率,提高产品品质。本设备可用于成品键盘和半成品键盘的检测。

This device detects the button function of the mechanical keyboard and uses a rotary dual station detection system to optimize the operation of personnel, truly achieving machine replacement and greatly improving work efficiency and product quality. This device can be used for the detection of finished and semi-finished keyboards.

检测功能/Detection function

- | | |
|----------------|--|
| 1. 按键重码 | 1. Key code duplication |
| 2. 按键无码 | 2. No code for buttons |
| 3. 按键错码 | 3. Key error code |
| 4. 按键短路 | 4. Button short circuit |
| 5. 按键卡键 | 5. Key card key |
| 6. 连续发码 | 6. Continuous coding |
| 7. PIDVID检测 | 7. PIDVID detection |
| 8. USB及PS2接口兼容 | 8. USB and PS2 interface compatibility |



键盘组装检测一体机系列

四工位组装测试机

键盘组装测试设备,一台设备,实现键盘组装过程中自动打螺丝,自动键帽压合,自动AOI检测,自动ATE测试等功能。

Keyboard assembly testing equipment, a device that realizes functions such as automatic screwing, automatic key cap pressing, automatic AOI detection, and automatic ATE testing during keyboard assembly.



键盘组装检测一体机系列

五工位键盘测试一体机

本设备检测键盘的按键功能和背光LED及背光字符颜色检测，ATE和AOI检测设备的功能。增加机械手臂取放产品，突破行业内键盘ATE+AOI一体机的产出数量。

This device detects the keyboard's button function, backlight LED, and backlight character color detection, as well as the ATE and AOI detection devices. Increase the production of robotic arm handling products and break through the production quantity of keyboard ATE+AOI all-in-one machines in the industry.

检测功能/Detection function

检测AOI功能：

1. 字符装错
2. 字符漏装
3. 字符装反
4. 误装字键
5. 镭雕字符缺陷
6. LED背光颜色错误
7. LED背光亮度过亮或过暗

检测ATE功能：

1. 按键重码
2. 按键无码
3. 按键错码
4. 按键短路
5. 按键卡键
6. 连续发码
7. PIDVID检测
8. USB及PS2接口兼容

Detect AOI function:

1. Character installation error
2. Missing characters
3. Character inversion
4. Misinstallation of character keys
5. Defects in laser engraved characters
6. LED backlight color error
7. LED backlight brightness too bright or too dark

Detect ATE function:

1. Key code duplication
2. Button without code
3. Button error code
4. Button short circuit
5. Key card key
6. Continuous coding
7. PIDVID detection
8. USB and PS2 interface compatibility



键盘组装检测一体机系列

锁螺丝压键帽一体机

自动锁螺丝功能 /Automatic screw locking function

1. 取代人工锁螺丝机，实现键盘自动锁螺丝；
2. 支持漏锁、滑、牙浮锁报警功能；
3. 机械手代替人工前后取，自动感应启动功能。
 1. Replace manual screw locking machines to achieve automatic screw locking on keyboards;
 2. Support alarm functions for missed lock, sliding, and tooth floating lock;
 3. The robotic arm replaces manual placement and retrieval, with automatic induction start function.

压键帽功能 /Key cap function

1. 组装键帽速度块；
2. 自动将键帽与托盘分离；
3. 不压伤键帽；
4. 二次压合功能；
5. MES系统获取准确的生产数据，助力数字化工厂建议。

1. Assemble the keycap speed block
2. Automatically separate the keycap from the tray
3. Do not press or damage the key cap
4. Secondary pressing function
5. MES system obtains accurate production data to assist digital factory recommendations.

鼠标检测设备系列

鼠标AOI检测机

本设备主要针对鼠标内柱脚贴自动视觉检测。通过智能视觉系统用机器代替人眼来做测量和判断，在设置好程序后，只需按下测试按钮，即可实现一键式快速检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

This device is mainly designed for automatic visual detection of mouse inner column base stickers. By using an intelligent vision system to replace human eyes with machines for measurement and judgment, after setting up the program, simply press the test button to achieve one click rapid detection, truly realizing machine replacement, reducing quality losses caused by human factors, and effectively improving production efficiency and product quality.

检测功能 /Detection function

检测AOI功能：

- 1、鼠标内柱脚垫歪
- 2、鼠标内柱脚垫贴偏
- 3、镭雕缺陷
- 4、LED背光亮度

Detect AOI function:

1. The mouse inner pillar foot pad is crooked
2. The mouse inner pillar foot pad is misaligned
3. Laser engraving defect
4. LED backlight brightness



鼠标检测设备系列

鼠标ATE检测机

鼠标ATE测试机，取代了传统的板卡读取鼠标数据方式，直接将鼠标与PC连接测试，只要PC系统win&iOS识别鼠标即可，无需安装鼠标驱动，并且可同时测试多个鼠标，大大提高生产效率。各种类型鼠标均可测试，跟换不同类型鼠标只需跟换鼠标治具板即可，可快速完成更换进入测试。

The mouse ATE testing machine has replaced the traditional way of reading mouse data from the board, directly connecting the mouse to the PC for testing. As long as the PC system recognizes the mouse, there is no need to install a mouse driver, and multiple mice can be tested simultaneously, greatly improving production efficiency. All types of mice can be tested, and changing different types of mice only requires changing the mouse fixture board, which can quickly complete the replacement and enter the test.

检测功能 /Detection function

1. 鼠标左右键、中间键、侧键功能键测试；
2. 鼠标滚轮测试；
3. 鼠标线性测试；
4. 左右主键手感测试；
5. DPI数据获取测试。

1. Mouse left and right keys, middle keys, and side key function key testing;
2. Mouse wheel test;
3. Mouse linearity test;
4. Hand feel testing of left and right main keys;
5. DPI data acquisition test.



PIN脚检测设备

双通道PIN脚测试机

设备主要对键盘轴背板连接器针脚检测，采用非接触扫描方式双通道检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

The equipment mainly detects the pins of the keyboard shaft backplane connector, using non-contact scanning dual channel detection to truly achieve machine replacement, reduce quality losses caused by human factors, and effectively improve production efficiency and product quality.



检测功能/Detection function

1. PIN脚缺陷检测
 2. 倒角检测
1. PIN pin defect detection
 2. Chamfer detection

PIN脚检测设备

转盘两工位PIN脚测试机

本设备主要对键盘轴背板连接器针脚检测，采用非接触扫描方式，两工位检测。

This device mainly detects the pins of the keyboard shaft backplane connector using non-contact scanning and two station detection.



检测功能/Detection function

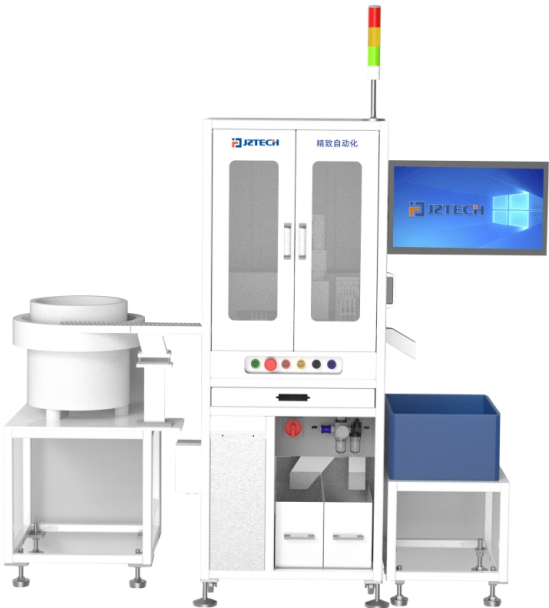
1. PIN脚缺陷检测
 2. 倒角检测
1. PIN pin defect detection
 2. Chamfer detection

非标定制

键盘轴开关测试机

键盘轴开关测试机对键盘轴开关集成了多个功能测试，各功能测试可同步进行，实现流水线自动测试键盘的手感及电性等功能，检测结果精准并且效率高，有效的提高了检测效率。

The keyboard axis switch testing machine integrates multiple functional tests on the keyboard axis switch, and each functional test can be carried out synchronously, achieving automatic testing of the keyboard's hand feel and electrical properties on the assembly line. The detection results are accurate and efficient, effectively improving the detection efficiency.



检测功能/Detection function

1. 电性测试
 2. 手感曲线测试
 3. 不良品自动分拣
 4. 测试合格品自动流入收集箱内
1. Electrical testing
 2. Hand feel curve test
 3. Automatic sorting of defective products
 4. Test qualified products will automatically flow into the collection box

非标定制

PCBA多功能测试机

测试PCB板轴位LED灯是否有错装或漏装

Test whether the PCB board axis LED lights are installed incorrectly or missing





非标定制

机械手上下料设备

全自动机械手臂代替人工取放产品，智能区分OK与NG不良品，设备适放于各种生产流水线上。实现生产自动化、智能化，降低劳动强度，提高生产效率。

Fully automatic robotic arms replace manual handling of products, intelligently distinguishing between OK and NG defective products, and the equipment is suitable for various production lines. Realize production automation and intelligence, reduce labor intensity, and improve production efficiency.

功能介绍 /Function Introduction

检测AOI功能：

- 流水线上代替人工取放产品
- 智能区分OK与NG不良品

Detect AOI function:

- Replacing manual picking and placing of products on the assembly line
- Intelligent differentiation of OK and NG defective products

检测内容 /Detection content

检测AOI功能：

- 蓝牙测试
- 功能测试
- 指示灯测试
- 电压、电流测试

Detect AOI function:

- Bluetooth testing
- Functional testing
- Indicator light test
- Voltage and current testing

计算器检测设备

流水线计算器AOI



本设备主要针对计算器的按键外观上字符印刷质量检测。对自动化流水线上在连续运动的产品进行自动定位，检测缺陷，NG产品可以标志出产品缺陷的位置。在设置好程序后，只需按下测试按钮，即可实现一键式快速检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

This device is mainly designed for the quality inspection of character printing on the appearance of calculator buttons. Automatically locate and detect defects for products in continuous motion on automated assembly lines, and mark the location of product defects for NG products. After setting up the program, simply press the test button to achieve one click quick detection, truly realizing machine replacement, reducing quality losses caused by human factors, and effectively improving production efficiency and product quality.

检测功能 /Detection function

检测AOI功能：

- 按键装错
- 按键漏装
- 按键装反
- 字符断线
- 字符残缺
- 可用于计算器按键背光检测（该功能仅限于检测灯光是否正常亮起，不能检测灯光颜色）

Detect AOI function:

- Wrong button installation
- Missing buttons
- Button installation reversed
- Character break
- Incomplete characters
- Can be used for calculator button backlight detection (this function is limited to detecting whether the light is on normally and cannot detect the color of the light)



计算器检测设备

在线式计算器AOI

本设备主要针对计算器的按键外观上字符印刷质量检测。优化了操作人员，真正实现机器换人，大大提高工作效率，提高产品品质。检测速度为 1 秒每个左右，具体产量根据产线流速决定，如产品摆放过于密集可能会造成产品检测误报问题。在设置好程序后，只需按下测试按钮，即可实现一键式快速检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

This device is mainly designed for the quality inspection of character printing on the appearance of calculator buttons. Optimized operators, truly achieving machine replacement, greatly improving work efficiency, and enhancing product quality. The detection speed is about 1 second each, and the specific output is determined by the flow rate of the production line. If the products are placed too densely, it may cause false alarms in product detection. After setting up the program, simply press the test button to achieve one click quick detection, truly realizing machine replacement, reducing quality losses caused by human factors, and effectively improving production efficiency and product quality.

检测功能 /Detection function

检测AOI功能：

- 按键装错
- 按键漏装
- 按键装反
- 字符断线
- 字符残缺
- 可用于计算器按键背光检测（该功能仅限于检测灯光是否正常亮起，不能检测灯光颜色）

Detect AOI function:

- Wrong button installation
- Missing buttons
- Button installation reversed
- Character break
- Incomplete characters
- Can be used for calculator button backlight detection (this function is limited to detecting whether the light is on normally and cannot detect the color of the light)

计算器检测设备

多工位计算器一体机



本设备主要针对计算器按键测试计算公式功能，计算器字符印刷造成的质量缺陷检测。采用双层结构运动检测，一层可同时放置多个产品同步测试，检测效率可提升 50%。在设置好程序后，只需按下测试按钮，即可实现一键式快速检测，真正实现机器换人，减少人为因素带来的质量损失，有效提高生产效率和产品质量。

This device is mainly designed for testing the calculation formula function of calculator buttons and detecting quality defects caused by calculator character printing. Adopting a double-layer structure for motion detection, multiple products can be placed on one layer for synchronous testing, and the detection efficiency can be improved by 50%. After setting up the program, simply press the test button to achieve one click quick detection, truly realizing machine replacement, reducing quality losses caused by human factors, and effectively improving production efficiency and product quality.

检测功能 /Detection function

检测AOI功能：

- 按键装错
- 按键漏装
- 按键装反
- 字符断线
- 字符残缺
- 按键功能
- 测试计算公式功能
- 可用于计算器按键背光检测（该功能仅限于检测灯光是否正常亮起，不能检测灯光颜色）

Detect AOI function:

- Wrong button installation
- Missing key installation
- Button installation reversed
- Character break
- Character incomplete
- Key functions
- Test calculation formula functionality
- Can be used for calculator button backlight detection (this function is limited to detecting whether the light is on normally and cannot detect the color of the light)