



SHENZHEN TAKACHIHO TECHNOLOGY CO., LTD.

Fast, Accurate, Steady, Tactical

AI+3D SPI TH400-C



○ ***AI 3D SPI***



Takachiho

AI 3D SPI

TH 400-C



真3D+AI 一次检测所有缺陷

True 3D+AI detects all defects at one time

产品特点

PRODUCT FEATURES

- 最新自研AAM绝对精度测量系统, 实现点到点, 线到线, 点到弧距离精准测量。
The latest self-developed AAM absolute precision measuring system, accurate detection of poor pad printing of 0201 mm components.
- 高精度自动Z轴模组, 可以适应多种复杂制程
High-precision automatic Z-axis module, capable of adapting to various complex processes
- 可根据工厂需求对接集成 MES 系统
Can be integrated with MES according to factory requirements.
- 强大的 SPC 软件, 提供丰富准确的数据统计
Powerful SPC (Statistical Process Control) software provides rich and accurate data statistics.
- 一体式铸造, 高刚性平台
Integrated casting, high-rigidity platform



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3D 检测效果

3D INSPECTION EFFECT

小角度2路投影系统, 更大程度消除小间距遮挡

突破性摩尔条纹算法, 进一步减少CT时间

Small Angle 2-way projection system, eliminate small spacing occlusion to a greater extent

Breakthrough Morie fringe algorithm to further reduce CT time

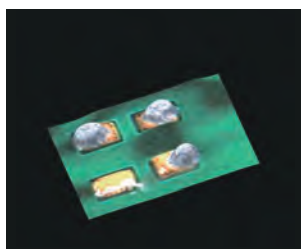


常见缺陷检测

COMMON DEFECTS



多锡
Excess solder



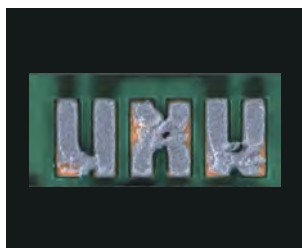
漏印
Print leakage



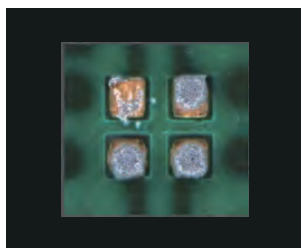
偏移
Skew



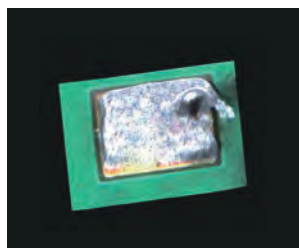
桥连
Short circuit



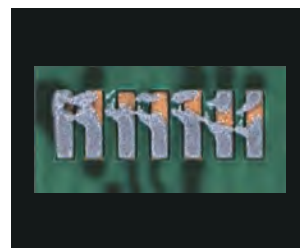
桥连
Short circuit



少锡
Insufficient solder



锡膏拉尖
Irregular solder paste



异形
Odd-shaped

AI可检测缺陷

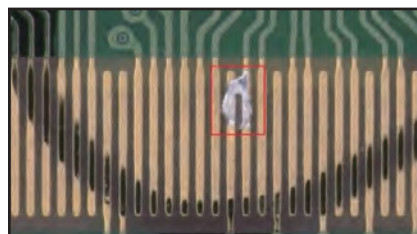
AI DETECTABLE DEFECTS



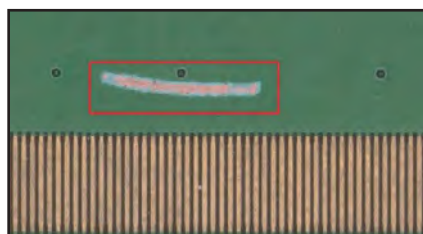
金面划伤
Gold surface scratch



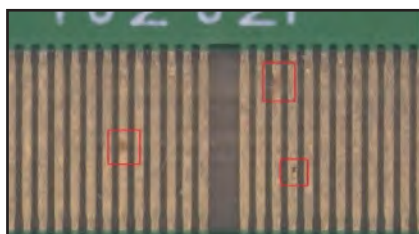
金面污染
Gold surface contamination



沾锡
Excess solder



漏铜
Copper Leakage



异色
Oxidation



异物
Foreign material



型号 Model	TH 400-C	
视觉系统 Vision system	成像 Imaging	12MP, Optional 21MP
	分辨率 Resolution	5μm/10μm/15μm/20μm
	FOV尺寸 FOV size	20mm*15mm/40mm*30mm/60mm*45mm
	速度 Speed	0.34s/FOV
	镜头类型 Lens Types	远心镜头 Telecentric lens
	投影头 Projector	双投影头 2 projector
运动机构 Motion mechanism	精度 Accuracy	丝杆精度 Screw accuracy: $\pm 1\mu\text{m}$; 定位精度 Positioning accuracy: $\pm 10\mu\text{m}$
	XY马达控制系统 XY axle control	AC伺服马达 AC Servo motor
	Z轴实时升降板弯补偿 Z-axis real-time lifting plate bending compensation	标配 Standard configuration
	流向Flow to	左到右; 右到左; 右到右; 左到左。可定制 Left to right; Right to left; Right to right; Left to left. Customizable
	轨道高度Track height	900 $\pm$ 30mm
检查规格 Optional function	基板尺寸Substrate size	400*400mm
	检查项目Inspection items	高度, 面积, 体积, 偏移, 形状 (height, area, volume, offset, shape)
	检测不良类型Non-Perform Types	漏印, 少锡, 多锡, 连锡, 偏位, 形状不良, 异物, 沾锡 Missing, Shift, insufficient tin, excessive, bridge, offset, mal-shapes, Particle
重复性 Repeatability	重复精度Repeatability	4Sigma: 高度height < 5μm
	检测重复性Gage R&R	< 10%
软件部分 Software	数据统计data statistics	Histogram; Xbar-R chart,Xbar-s Chart ; CP&CPK;GRR; SPI Daily/weekly/Monthly report; MES (支持定制)
	辅助功能Auxiliary function	远程集中复判、条码读取 Remote repair、Barcode reading
	Gerber和CAD	支持Gerber格式 (274X, 274D) , 支持CAD合并输出SPI档 Support Gerber format (274X, 274D), CAD merge output SPI file
设备信息 Equipment information	电源Power Supply	AC220V, 3KW
	气压Pressure	0.4-0.6MPa, 5L/min
	设备尺寸/重量 size/Weight	1000*1640*1670mm, 800KG
	接口方式Port type	标准SMEMA接口, 支持OK/NG信号输出. Standard SMEMA interface, supports OK/NG signal output.
选配功能 Option Funtions	人工智能 Artificial intelligence	AI大数据训练中心 AI Data Training Center
	辅助功能 Auxiliary function	远程集中复判、外置条码读取 Remote centralized review, Barcode reading
电脑配置 Computer configuration	电脑类型Type of Computer	高性能工控机 High performance industrial computer
	CPU	Intel 12th Gen processor or equivalent
	内存\显存 Memory & GPU	64GB or higher; 8GB or higher
	硬盘容量 Hard drive capacity	500GB + 2TB SSD
	显示器 Displayer	22" LCD monitor
	操作系统 Operating System	Win10 Enterprise Edition



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