

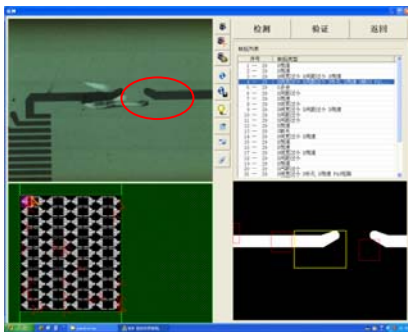
MCM JC-500 自动光学检测系统

MCM JC-500 AOI system

MCM JC-500 是用于 LTCC/HTCC 基片上印刷线路的检测设备，它以软硬件结合的形式实现了复杂检测算法快速、准确地执行。该设备操作简便，界面友好，检测效率高，是提高生产效率并降低成本的最佳选择。MCM JC-500 is developed for inspection of printed circuit on LTCC/HTCC. Firmware-based architecture enables quick and exact implementation of sophisticated algorithms. The equipment is an optimal choice for improvement of production efficiency and reduction of production cost because of easy operation, customized software interface and superb inspection efficiency.



主要技术特点 Main Features



多种算法组合

Integrated inspection algorithms

基于 FPGA 的多种算法组合-设计规则检验法，特征点比较和粗缺陷检查，图像处理速度快，误报率低。

板面自动对准，可消除板面定位偏转带来的误差。

Integrated inspection algorithms based on FPGA- Design Rule Check, Feature Compare and Gross Check. High speed of image processing and low false calls.

Automatic panel calibration to avoid errors of panel deflection

高精度运动控制系统

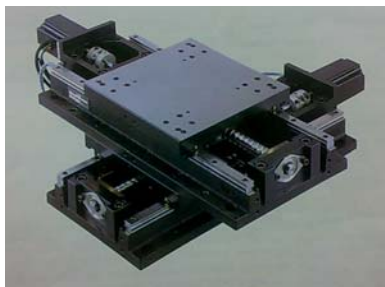
High precision Motion Control System

精密 X-Y 向工作台：采用伺服系统及精密丝杠轨道系统，光栅尺反馈，定位精度高。

调焦系统：采用步进电机及精密丝杠传动系统，并实现自动调焦。

Precise X-Y Stage: servo control system and precision lead screw rack system, grating scale feedback, high positioning accuracy.

Focusing control system: stepper motor and precision lead screw drive system, automated focusing.



高分辨率的成像及照明光路

High resolution imaging and illumination

成像光路：高分辨率，消色差的镜头，线扫描相机，视频相机及分光光路，实现检测及定位检修的成像。

照明：检测及检修相机共用的侧光照明，背光照明可选

Imaging: high-resolution, apochromatic lens,

line-scan camera, video camera and light splitting system



provide the image of inspection and repairing.

Illumination: sidelights for inspection and repairing cameras ,
optional bottom light



友好的中文界面

Customized software interface

友好的中文界面, 设定简单, 短期培训就可以达到良好的使用效果

Customized software interface, easy operation, short-term training to attain favorable effect

主要技术指标 Main Specification

检测材料: LTCC/HTCC 印刷线路

最大基片尺寸: 280mm×381mm

最大检测面积: 203mm×254mm

检测缺陷: 短路, 断路, 线宽/线距错误, 尺寸或位置错误, 缺口, 突出, 污染, 残渣, 针孔等

分辨率: 15μm, 12μm, 9μm, 4μm (可选)

检测速度: 最大 1300mm²/s

板面定位: 定位销

对比参照资料来源: CAM 文件

支持的 CAM 格式: ODB++, Gerber (RS274X)

Materials Inspected: printed circuit on LTCC/HTCC

Panel Size (maximum) : 280mm × 381mm

Inspection Area (maximum) : 203mm × 254mm

Detectable Defects: open, short-circuit, line/space width violation, size/position violation, nick, protrusion, contamination, debris, pinhole etc.

Resolution: 15μm, 12μm, 9μm, 4μm (optional)

Inspection Rate: up to 1300mm²/s

Tooling: tooling pins

Reference Source Data: CAM

CAM Format: ODB++, Gerber(RS274X)

分辨率	15μm	12μm	9μm	4μm
面/小时	360	275	240	90

Resolution	15μm	12μm	9μm	4μm
Sides/Hr	360	275	240	90

设备参数 Equipment Parameters

设备尺寸: 814mm×835mm×2100mm (长×宽×高)

重量: 500Kg

电力要求: AC220V±10%, 50Hz, 2000W

温度/湿度: 22±3°C; 50±10%RH

照明: 侧光源, 背光

操作系统: Windows2000, WindowsXP

Dimensions: 814 mm × 835 mm × 2100 mm (Length × Width × Height)

Weight: 500Kg

Power: AC220V±10%, 50Hz, 2000W

Temperature and Humidity: 22±3°C; 50±10%RH

Illumination: Sidelight, bottom light

Operating System: Windows2000, WindowsXP