



# ***GSR series***

**半自动PCB切割机 *Semi Automatic Router***

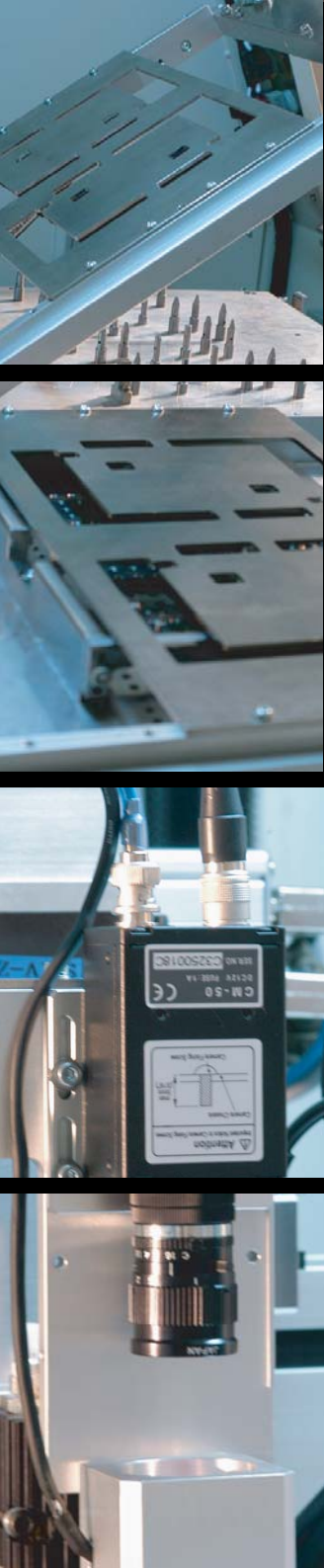


***Accurate High Speed User friendly interface***

界面软件 高精度 高速度 友善的用户界面软件 高精度 高速度 友善的用户界面软件 高精度 高

**GETECH**

Getech Automation Pte Ltd



Fixture

CCD Camera



## Features

- Copy, Paste and Offset functions
- Tool Bit Optimization to increase bit life
- Test Run mode to check routing paths
- Tool Break detection

## 性能

- 。拷贝，粘贴和平移功能
- 。提高刀具寿命的刀具优化功能
- 。检查切割轨迹的测试运行模式
- 。刀具断裂检测



## Safety

- Safety barriers to prevent operators from accessing work area.
- Spindle/Door safety interlocks to prevent any accidents.

## 安全性

- 。避免操作者进入工作区域的安全屏障
- 。避免任何意外发生的主轴和机门互锁



## Fixture

- Rigid fixturing and easy replacement
- Integrated top clamping for rigid holding of PCB
- Large and normal panel sizes available (see back for details)
- Universal and Dedicated fixtures available

## 夹具

- 。高刚度夹具和容易更换
- 。完整的PCB顶端夹紧
- 。适用于大、适中尺寸的线路板（详细见后）
- 。适用于通用和专用夹具



## Speed and Accuracy

The GSR series dual table router is capable of **speeds of up to 100mm/s** and **positioning speeds of 1000mm/s**. It allows continuous routing with no stoppages during panel loading and unloading. The superior quality axis system allows the system to have **high acceleration/deceleration**, **reducing cycle time** (increase in production output) and at the same time **maintaining high accuracy**.

## Programming

Using a **high resolution CCD camera**, GSR user-friendly **window-based software** allows the user to program the routing paths in minutes. There are also no limitations in the number of programs stored.

## Reliable Hardware

GSR uses high quality components to ensure rigidity and high performance. The ball screw axis are protected to **keep out any dust or dirt**. This will **increase the life and performance of the axis**.

## 速度和精度:

GSR系列双工作台切割机，速度高达100毫米/秒，定位速度1000毫米/秒。在装载和卸载期间能够不间断连续切割。

高质量的转轴系统使系统能够快速加速和减速，减少周期时间，提高生产率，同时保持高精度。

## 编程:

系统使用高分辨率CCD摄像机。GSR友善的用户视窗软件允许用户在数分钟内编写好切割轨迹。存储的程序数目无限制。

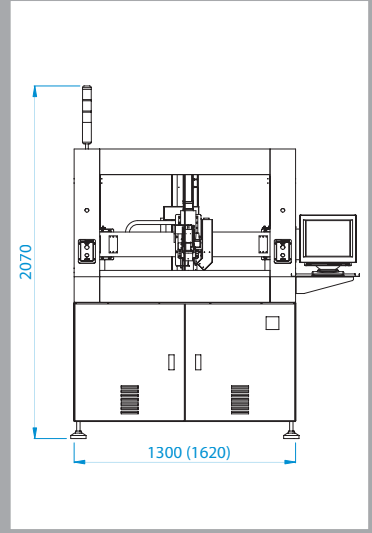
## 硬件可靠:

GSR使用高质量的硬件以保证高刚度和高性能。所有导螺杆被遮住以防止灰尘和脏物进入，从而提高转轴的寿命和性能。

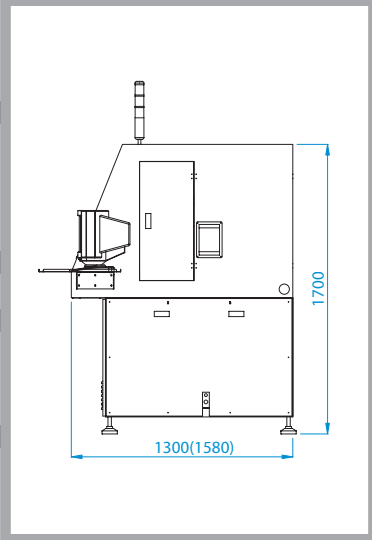


# Features and Specifications

MECHANICAL SPECIFICATIONS		OPERATING SYSTEM	
<b>Manipulator</b>		<b>Spindle speed</b> 5,000 - 50,000 rpm adjustable via frequency converter	
Manipulator Motor	4 axis AC brushless servo motors	<b>Routing capability</b>	
Manipulator Repeatability	±0.02mm	<b>Non routing speed</b>	1000 mm/sec
Resolution	±0.010mm	<b>Routing speed</b>	100 mm/sec max depending on material, cutting quality & tool diameter
Configuration	X, Y1, Y2 & Z-axis	<b>Repeatability</b>	<0.1 mm Straight lines, curves and interpolated profiles
<b>Work station</b>		<b>Maintenance</b>	
<b>Board Positioning</b>	Two workstations, Side by Side each with dedicated or modular fixtures	<b>Spindle bearing</b>	Ceramic bearings
<b>Panel location</b>	Located by tooling holes or edge of PCB	<b>Router bit</b>	100 to 300 m cutting distance before next tool change, depending on PCB and fixture.
<b>Loading/Unloading</b>	Manual Loading / Unloading	<b>Filter bag</b>	1000m to 1500m before next filter bag change
<b>Panel Size</b>	350 x 350mm (500 x 500mm - GSR1280)	<b>Safety features</b>	E Stop, Spindle stop, Spindle motor overheat & Servo overload detection
<b>Panel Thickness</b>	0.4 - 2.0mm	<b>Noise level</b>	<78 dBa
<b>Spindle Motor</b>		<b>System platform</b> Windows® based PC	
<b>Power</b>	0.15kw	<b>Vision system</b>	High resolution video camera
<b>Max. speed</b>	50,000rpm	<b>Programming</b>	
<b>Cooling</b>	Ambient cooled	<b>On-line</b>	Vision assisted point to point manual teaching, or manual Data Input of co-ordinates
<b>Router bit</b>	Shank size 3.175mm (1/8 ")	<b>Editing function</b>	Dry run vision assisted / test run mode
<b>Tool change</b>	Manual	<b>Variables functions</b>	Tool bit diameter compensation, Filter change interval (distance) setting, Tool bit wear compensation
<b>Vacuum System</b>		<b>Operation monitor</b>	
<b>Power</b>	3 kW rotary vane blower	<b>Router bit</b>	Tool life tracking, PCB board count. Tool broken sensor
<b>Filtration</b>	3 stage disposable industrial vacuum filter bag	<b>Vacuum</b>	Vacuum filter change alarm
<b>Utilities</b>		<b>Machine</b>	
<b>Power supply</b>	380-415v, 3 phase, 20 amps, 50 Hz, (options available)	Machine error history	
<b>Air supply</b>	6 bars, consumption <6 L/min		



机械特性		操作系统	
<b>驱动系统</b>		<b>主轴转速</b> 5000 ~ 50000 转/分钟, 由变频器来调节	
驱动系统马达:	交流无刷伺服马达	<b>切割性能</b>	
驱动系统重复精度:	±0.02mm	<b>非切割速度:</b>	1000毫米/秒
分辨率:	±0.010mm	<b>切割速度:</b>	最大100 毫米/秒, 取决于线路板材料和切割质量
配置:	X, Y1, Y2 & Z轴	<b>重复精度:</b>	< 0.1 毫米, 对直线和曲线的轮廓
<b>工作台</b>		<b>维护</b>	
线路板定位:	两个工作台, 并行排列, 装有特殊或标准夹具	<b>主轴轴承:</b>	陶瓷轴承
线路板位置:	由线路板上的定位孔或边来定位	<b>刀具:</b>	切割行程100 ~ 300米后需更换, 取决于PCB和夹具
装卸方式:	人工方式	<b>过滤袋:</b>	切割1000 ~ 1500米后需更换
线路板尺寸:	350毫米 X 350毫米 (500毫米 X 500毫米 - GSR1280)	<b>安全设置:</b>	整机紧急停止开关, 主轴紧急停止开关, 主轴马达过温和伺服马达过载检测
线路板厚度:	0.4毫米-2毫米	<b>噪声:</b>	< 78分贝
<b>主轴马达</b>		<b>系统界面</b> 视窗系统个人计算机	
功率:	0.15 千瓦	<b>视觉系统</b>	高分辨率摄像机
最大转速:	50000 转/分钟	<b>编程</b>	
冷却方式:	空冷	<b>在线:</b>	借助于视觉的点到点的人工示教或人工输入座标值
刀具:	标准刀具直径3.175mm (1/8")	<b>编辑功能:</b>	视觉系统的空载运行和切割点的空载运行
<b>真空系统</b>		<b>可变功能:</b>	刀具直径补偿, 过滤袋更换间隔设置和刀具磨损补偿
功率:	3 千瓦旋转式叶片吹风机	<b>运行监控器</b>	
过滤:	一次性使用的三级工业真空过滤袋	<b>切割点:</b>	刀具寿命跟踪, PCB计数, 刀具断裂传感器
<b>电气供应</b>		<b>真空:</b>	真空过滤袋更换警告
电源:	380 ~ 415 伏, 3相, 20 安培, 50 赫兹 (可由用户要求决定)	<b>机器:</b>	机器故障记录
气源:	气压6巴, 消耗量 < 6 升/分钟		



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