



# AR-450 PCB ROUTER

## Description

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AR-450 PCB Router adopt high precision all servo driving system and high quality routing spindle which can ensure <0.05mm routing accuracy , x,y,z moving speed can reach 500mm/s , routing speed can reach 50m/s. and machine is equipped high resolution CCD which can automatically position fiducial mark and correct coordinate offset .windows operation system and self developed software make programming very easy , built in vaccum cleaner can provide a clean work enviroment.

## Features

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- X,Y,Z Servo motor and driving system.
- High precision Lead screw and linear guide rail.
- Built in vaccum cleaner.
- High quality routing spindle.
- Industrial PC and windows English operation system
- Fiducial mark positioning ,automatically correct coordinate offset
- Max 310\*480mm PCB width capable.
- Overall Size : 595 (W) 1220 (D) 1500 (H)mm

## General

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1.AR-450M PCB Separator adopt x,y,z servo motor and driving system and ball screw ,linear guide rail ,ensure machine run smooth and precisely.moving accuracy less than 0.05mm, routing accuracy less then 0.05mm.

2.Machine is equipped with high resolution CCD ,use direct teach programming method with cross cursor of CCD, very easy to operate , software can excute point ,line ,arc ,circle etc command to cut different shape of panelled board ,it has mark positioning function ,can automatically correct the coordinate offset when PCB position changed .Also the CCD has the function of scanning bar code and QR code, which can scan the bar code and QR code information on the PCB board directly, and then call the preprogrammed program on the machine to cut the PCB board directly.

3.Industrial PC ,Windows system and full english self developed software makes programming and operating very easy.

4. Equipped with quality ,air cooling long service life routing spindle.

5. External silence vacuum cleaner provide a clean and low noise work environment .

6. Milling cut can be used as 2 or 3 section , just set the parameter on software , it has greatly prolonged milling cut' service life.

7. Equipped with anti static ionizing wind which can eliminate static and remove dust .

8. Option MES system, The machine can be docked with the factory's MES system. it will be convenient for program call and data download, production log upload.

9. The machine is equipped with the broken knife detection function. When the Router bit is broken, the machine will stop, and the software interface will alarm.

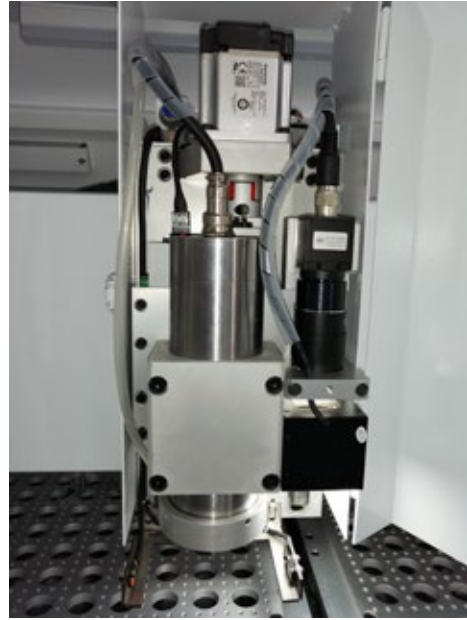
## Specifications

|                            |   |
|----------------------------|---|
| Model                      | PAR-450                                       |
| Work station               | 1 work station                                |
| PCB Size (Max.)            | 310×480mm* 1pcs                               |
| PCB Thickness              | 0.4-2.0mm(hard board)                         |
| PCB Material               | FR4, glass fiber, Al                          |
| Max component height       | 50mm  |
| Cutting Speed(Max)         | 50mm/s  |
| Moving speed               | Max 500mm/s                                   |
| Control method             | line, circle, arc, U, L                       |
| Repeat Accuracy            | ±0.05 (mm)                                    |
| Routing Accuracy           | ±0.05 (mm)                                    |
| Drive system               | X/Y/Z Three axis servo motor control          |
| Vacuum cleaner             | 3PH AC 380V 50HZ/2.2 KW (Built in the router) |
| Routing Spindle            | 42000rpm/min, Air cooling                     |
| Milling Cutter             | Ø 0.8, -Ø 3.0                                 |
| Tool life control          | Software program control                      |
| Programming method         | Direct teach programming method               |
| Machine Total Power Supply | 3 phase AC 380V 50HZ/ 3.7 KW                  |
| Machine size               | 595 (W) 1220 (D) 1500 (H)mm                   |
| Machine Weight             | 350 Kg  |

## Details

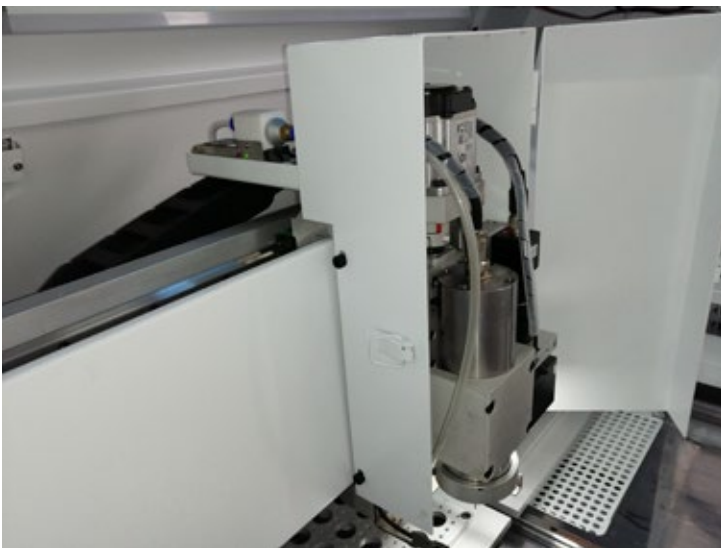


X,Y,Z axis adopt panasonic servo motor and it's driving system ,ball screw drive with rail & slider, make movement smoothly and precisely.

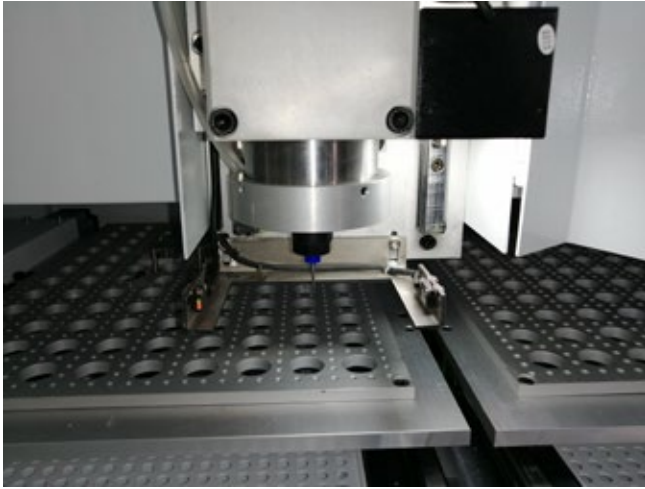


Equipped with High resolution CCD makes programming very easy.It has mark positioning function ,can automatically correct the coordinate offset.Also the CCD has the function of scanning bar code and QR code, which can scan the bar code and QR code information on the PCB board directly, and then call the finished program on the machine to cut the PCB board directly.

Option MES system,Through the CCD on the router and MES system software for the router ,the machine can be docked with the factory's MES system.it will be convenient for program call and data download, production log upload.



High quality air cooling long service life routing spindle .The machine is equipped with an ion air gun. The ion wind blown from the bottom of the spindle can eliminate the static electricity generated during the cutting process.



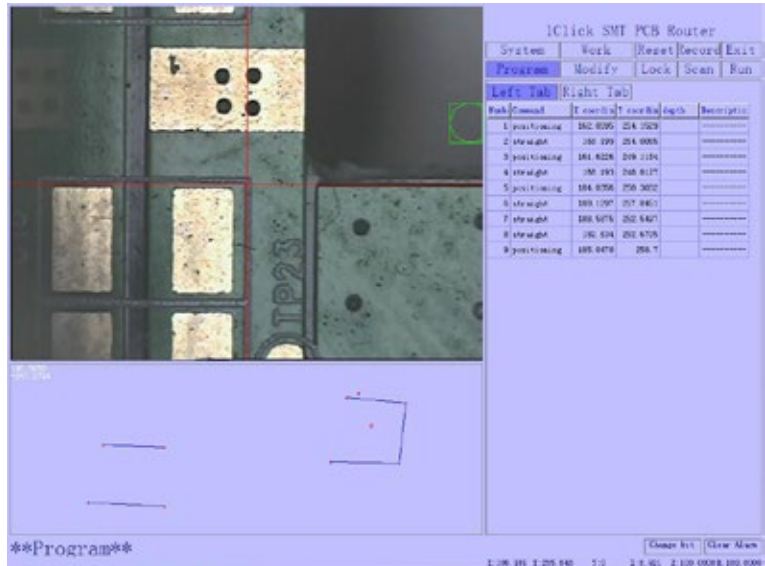
The machine is equipped with the broken milling cutter detection function on the spindle. When the milling cutter is broken, the machine will stop, and the software interface will alarm.



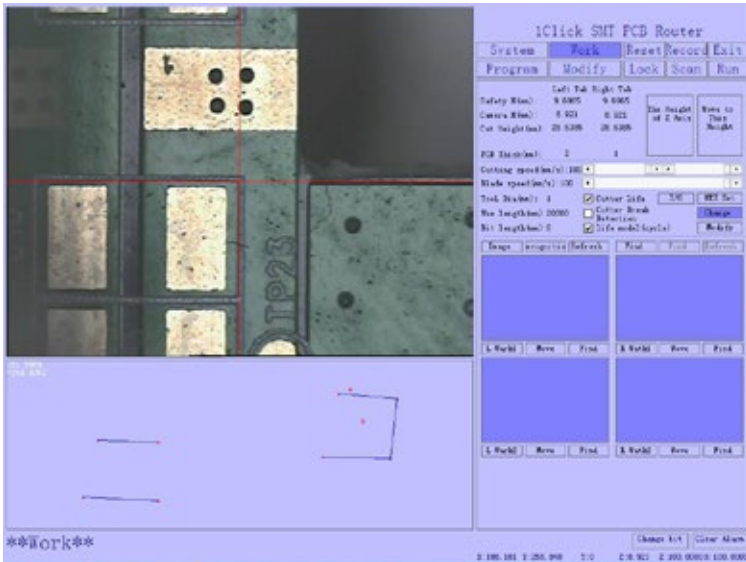
400W high-power spindle, which can cut Al board below 2.0mm thickness (machine needs to use custom-cut aluminum board milling cutter)



Built in 2.2KW vacuum cleaner provide a clean and low noise work environment.



Self developed software makes programming and operating very easy. The software interface can set the Z-axis cutting depth and set different Z-axis cutting depths depending on the thickness of the PCB. Ensure that the Z-axis can cut the PCB at a fixed height (suitable for PCBs with components on the back of the cutting point, ensuring that the milling cutter does not damage the components on the back of the PCB).



Milling cut can be used as 2 or 3 section , just set the parameter on software , it has greatly prolonged milling cut' service life.

## Includes

- PAR-450 PCB Router
- Industrial PC ,monitor, Keyboard,mouse
- 3 aix driving system
- Vaccum cleaner
  - Milling cutter 10pcs
- Servo motor driven width mechanism
- CCD
- Routing sprindle
- 1 year parts warranty
- Broken milling cut auto detection\*1set
- Ion air gun on the spindle \*1set

## Optional

- Customized fixture
- Milling cutter
- MES system docking