



CHARMHIGH

*Chinese Leading Brand of High-end Pick and Place Machine*

# CHM-751

**6-head High-precision Universal  
SMT Pick and Place Machine**



CHARMHIGH TECHNOLOGY LIMITED

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## Specifications

|                        |  |
|------------------------|--|
| Dimensions             | 1280mm(L) × 1260mm(W) × 1500mm(H)  |
| Weight                 | 670kg  |
| Power Supply           | AC220V(50Hz, three phase), 2.8kw   |
| Air Supply             | 0.5MPa ~0.7MPa   |
| Vacuum Generation      | Built-in vacuum pump   |
| Mounting Head Quantity | 6  |
| Mounting Speed         | Optimal Speed 18400CPH (best conditions under our company);<br>IPC9850 Actual Mounting Speed: 13400CPH                     |
| Mounting Accuracy      | (xy)±0.05mm CPK≥1.0  |
| Component Height       | ≤12mm  |
| Component Type         | Resistor capacitor exclusion, cylindrical diode, aluminum capacitor, SOT, SOP, QFP, QFN, BGA, etc                          |
| Component Range        | Can mount components within the range of imperial 0201 to 36mm×36mm  |
| PCB Thickness          | 0.6mm~3.5mm  |
| PCB Size               | 450mm(L)×350mm(W) (standard); 800mm(L)×350mm(W) (optional)   |
| PCB Conveying          | 3-section-rail automatic conveying,PCB support   |
| Nozzle Change          | Automatic nozzle change (19-hole nozzle library)   |
| Control System         | Built-in industrial computer (Windows7) equipped with monitor,keyboard,and mouse   |
| Drive System           | X&Y axis driven by servo motors (Y axis by double motors)<br>adopting flexible S-curve acceleration and deceleration       |
| Transmission System    | Ball screw + linear guide (Y axis with double screws)  |
| Feeding System         | 50 Yamaha 8mm standard pneumatic/electric feeder stacks (also suitable for IC tray and stick feeder)                       |
| Vision System          | Fly camerax6 (component size applicable: 16mm×16mm)<br>IC camerax1 (component size applicable: 36mm×36mm)<br>Mark camerax2 |



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# CHM-751 6-head High-precision Universal Pick and Place Machine

Optimal Speed: 18400CPH (under the best conditions of our company)

IPC9850 Actual Mounting Speed: 13400CPH

Mounting Accuracy: (xy) $\pm$ 0.05mm CPK $\geq$ 1.0

Components Mounting Range: Inch size 0201-36mmX36mm

## The Y-axis Adopts Twin Servo Control System

The Y-axis adopts twin servo + twin screw+ linear guide transmission

## Support CPK Detection

Ensuring that process capabilities remain stable and guaranteed

## ANC (Auto Nozzle Changer)

Automatic nozzle distribution and automatic nozzle replacement

## Automatic Thermal Compensation Correction System

Ensure long-term working stability of equipment

## High-speed and High-precision Industrial-grade Vision System

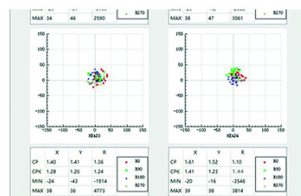
Fly camerax6, IC camerax1, Mark camerax2



## 1.Optimize Configuration to Greatly Improve Reliability

### Support CPK Detection

Mounting accuracy: (xy) $\pm$ 0.05mm CPK $\geq$ 1.0 ensures continuous and stable process capability.



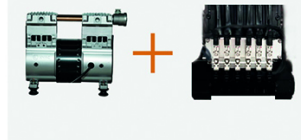
### The Y-axis Adopts Twin Servo Control System

Twin servo motor advantage: effectively synchronously drives the movement of the beam to ensure that the X beam works parallel to the Y axis when the mounting machine is working at high speed for a long time, avoiding the problem of angular pendulum torque caused by single motor drive during work, and improving accuracy and continuous reliability.



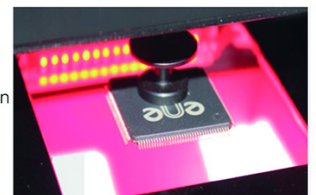
### Built-in Vacuum Pump + Solenoid Valve Structure

It is optimized into a vacuum pump device and adopts a solenoid valve structure to make the adsorption stronger and more stable.



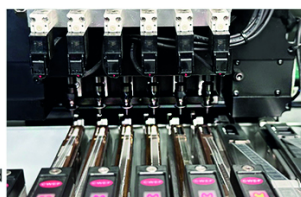
### HD IC camera

High-definition identification of BGA, QFP, QFN and other 36\*36mm components to achieve high-precision general-purpose mounting.



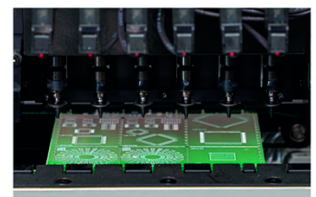
### 6 Heads Capable of Picking Components Simultaneously

The Z-axis independent motor of the mounting head has a closed-loop control of a high-precision nozzle rod. It has good concentricity, high precision in simultaneous picking, and is not easy to deform. It can realize simultaneous picking and high-speed mounting of components.



### Vacuum Detection Function

Each nozzle has an independent detection function to improve the stability of the equipment and the reliability of the product.



## 2.Ensure Equipment Efficiency and Stability

### High-precision Universal Mounting Head

Independent Z-axis and R-axis motor control, combined with a high-speed front camera and a set of precision IC vision systems, realize universal high-speed mounting.



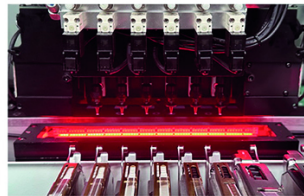
### ANC(Auto Nozzle Changer)

The 19-hole nozzle library can preset different types of nozzles. Software control automatically allocates and replaces nozzles according to component mounting requirements, reducing mounting rounds and improving production efficiency.



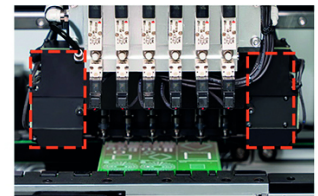
### High Speed Fly Camera

Can simultaneously identify 16mm×16mm components at high speed to improve work efficiency.



### Dual Mark Camera

- 1.Wider recognition range.
- 2.Correct PCB angle and coordinate acquisition.
- 3.Quickly teach the component picking position.



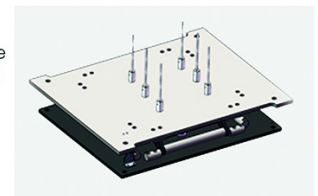
### Automatic Thermal Compensation Correction System

Monitor and correct accuracy deviations caused by thermal energy during work to continuously maintain mounting accuracy and stability.



### PCB Support Device

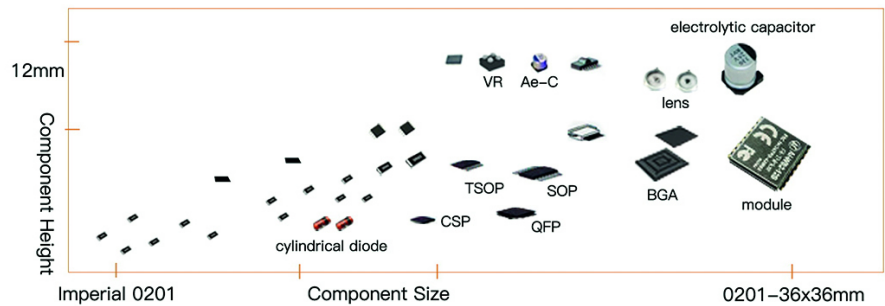
It can support the PCB to prevent the mounting quality from being affected when the PCB is large or thin.



## 3.Mounting Capabilities and Substrate Processing Capabilities

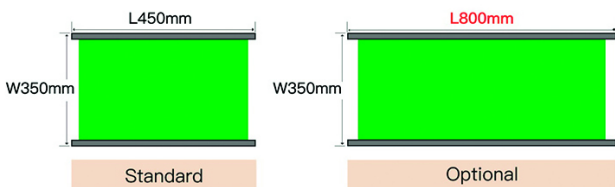
### General Purpose Mounting of Various Components

It can achieve high-precision and stable mounting of the smallest 0201 and large-size components.



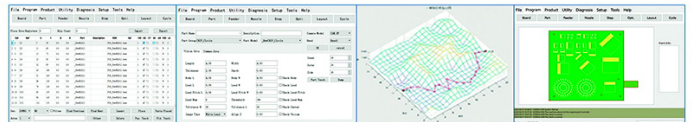
### PCB Adaptability Range

Support: L450mm\*W350mm (three-stage transfer standard);  
Optional: L800mm\*W350mm (two-stage split mounting)



### Software Function Integration

Easy to carry out and manage production, easy to learn.



### Feeding System

Feeding system: using electric/pneumatic feeder, which is economical and stable.

Vibration feeder: support the feeding of tubular components.  
IC tray: support TRAY feeding and bulk components feeding.