

Dinghua Technology Auto BGA rework machine with optical alignment system

Technical parameter



I.Function feature:

- 1.Optical alignment, precise chip placement alignment, completely avoiding misalignment and offset.
2. Automatic disassembly, automatic welding, automatic recovery of chips, completely liberating workers.
- 3.The device is not damaged at all in the process of disassembly and soldering (including damage appearance and function).
- 4.The process of disassembly and soldering does not affect the peripheral and back components of the chip at all.
5. The preheating temperature adopts light-emitting heating tube, which heats up quickly and is stable at a constant temperature. After disassembly or soldering, the PCBA does not change color and does not deform.
- 6.The external temperature measurement interface is convenient to detect the temperature at any time, and the temperature control is more accurate and reliable.
7. Touch screen operation, pre-set program, which can be used proficiently without professional technical training, making chip solder or desolder very simple.



8. Manual and automatic operation modes, debugging or batch repairing are more convenient and simple.
9. External USB interface, used for software update and various repair data imported into computer for analysis and storage.
- 10.Application for removing and soldering of lead-free and lead-free products.
- 11.Application for repairing a variety of SMD components(POP,SOP,SOJ,QFP,QFN,BGA,PLCC,SCP.....).





II . Product parameter.

Total Power	5700W
Top heater	1200W
Bottom heater	2 nd heat-zone:1200W, 3 rd heat-zone:3200W (extended preheating zone for various PCBa)
power	AC100~240V±10% 50/60Hz
Dimensions	L600×W700×H850 mm
Positioning	V-groove,PCB-platform with fixtures is movable at X-axis
Temperature control	K-type thermocouple, Closed-loop
Temp accuracy	±1°
Position accuracy	0.01mm
PCB size	Max 450×500 mm Min 10×10mm
BGA chip	1*1-80X80mm
Minimum chip spacing	0.1mm
External Temperature Sensor	1 pcs (more available if needed)
Net weight	70kg



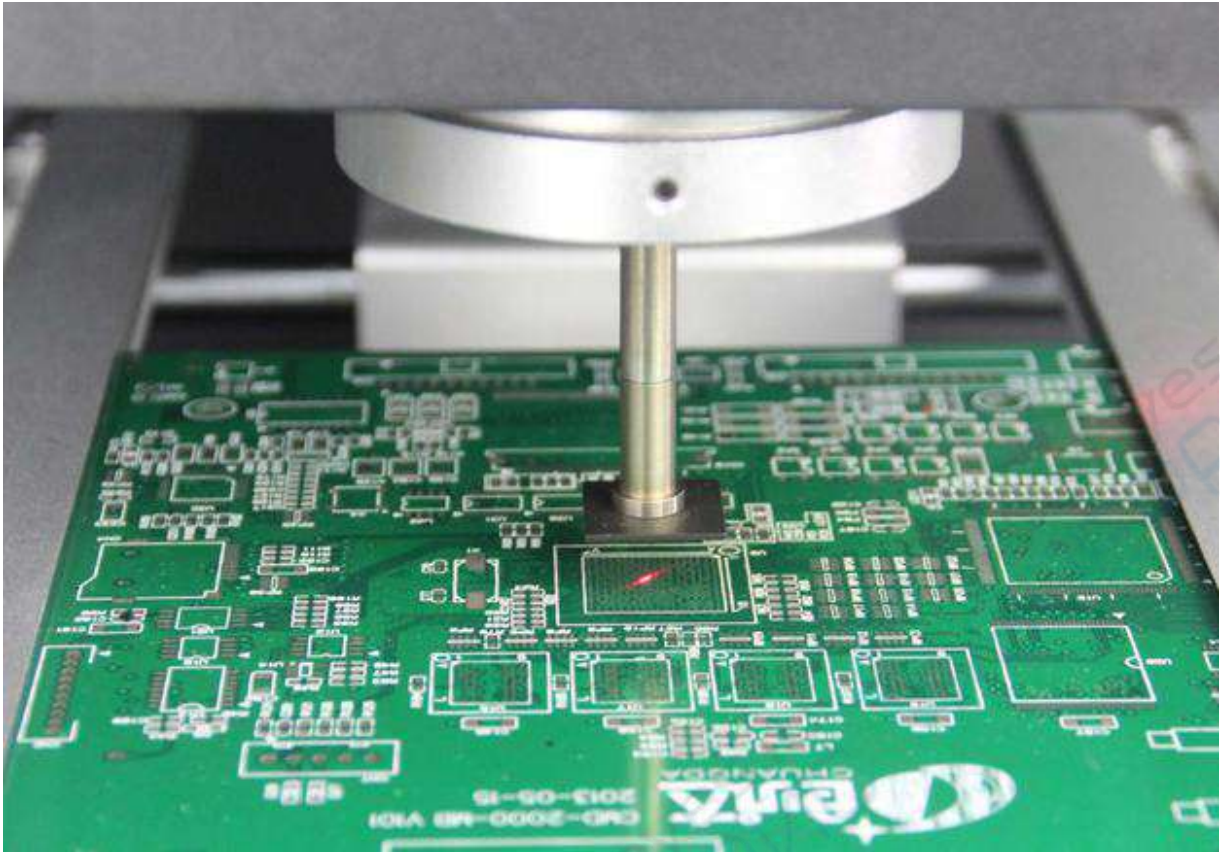
III. Product description.

1. Embedded Industrial Computer, High-definition touch screen man-machine interface, PLC controlling, and has the function of instantaneous curve analysis. Real-time display of the setting and measured temperature curve, and the curve can be analyzed and corrected;
2. High-precision K-type thermocouple closed-loop control and temperature automatic compensation system, combined with PLC and temperature module to achieve precise temperature control, keep the temperature deviation at ± 1 degrees. At the same time, the external temperature measurement interface realizes the precise detection of temperature. And realize the accurate analysis and proofreading of the measured temperature curve;
3. Adopt stepping motion control system: stable, reliable, safe and efficient; adopt high-precision digital video alignment system, PCB board positioning adopts V-shaped groove and linear sliding seat, so that the three axes of X, Y and Z are all can be used for fine adjustment or rapid positioning, convenient and accurate, to meet the positioning of different PCB board layout methods and different sizes of PCB boards;
4. The flexible and convenient movable universal fixture protects the PCB board, prevents damage to the edge of the PCB and PCB deformation, and can adapt to the rework of various BGA package sizes;
5. Equipped with a variety of alloy nozzles, which can be rotated and positioned at 360 degrees, easy to install and replace;
6. A total of three-temperature-zone(both upper and lower) are heated independently, and the three-temperature-zone can be simultaneously controlled by multiple groups and sections to ensure that different temperature zones can achieve the best welding effect simultaneously. Heating temperature/time/slope, cooling, and vacuum can all be set on the man-machine interface;
7. The upper and lower temperature-zones can be set to 8 sections of temperature control, which can store a large amount of temperature curves, they can be called at any time according to different BGAs. Curve analysis, setting and correction can also be performed on the touch screen; independent PID algorithms for the three heating zones Control the heating process, the temperature rise is more uniform, and the temperature is more accurate;
- 8.
9. Use high-power cross-flow fans to quickly cool the PCB board to prevent deformation of the PCB board, and realize intelligent automatic control of the mounting, welding and disassembly process;
10. The joystick can be used to move the head up and down and zoom in and zoom out the image, which is fast and convenient;
11. Equipped with voice-activated "early warning" function. 5-10 seconds before the completion of disassembly or welding, the operator will be warned by voice to make relevant preparations. After the upper and lower hot air stops heating, the cooling system starts and automatically stops cooling when the temperature drops to normal temperature. Ensure that the machine will not age after the heat rises up;
12. It has the functions of automatic reclaiming, automatic feeding, and automatic telescopic camera;
13. CE certified, equipped with emergency stop switch and automatic power-off protection device for sudden accidents.

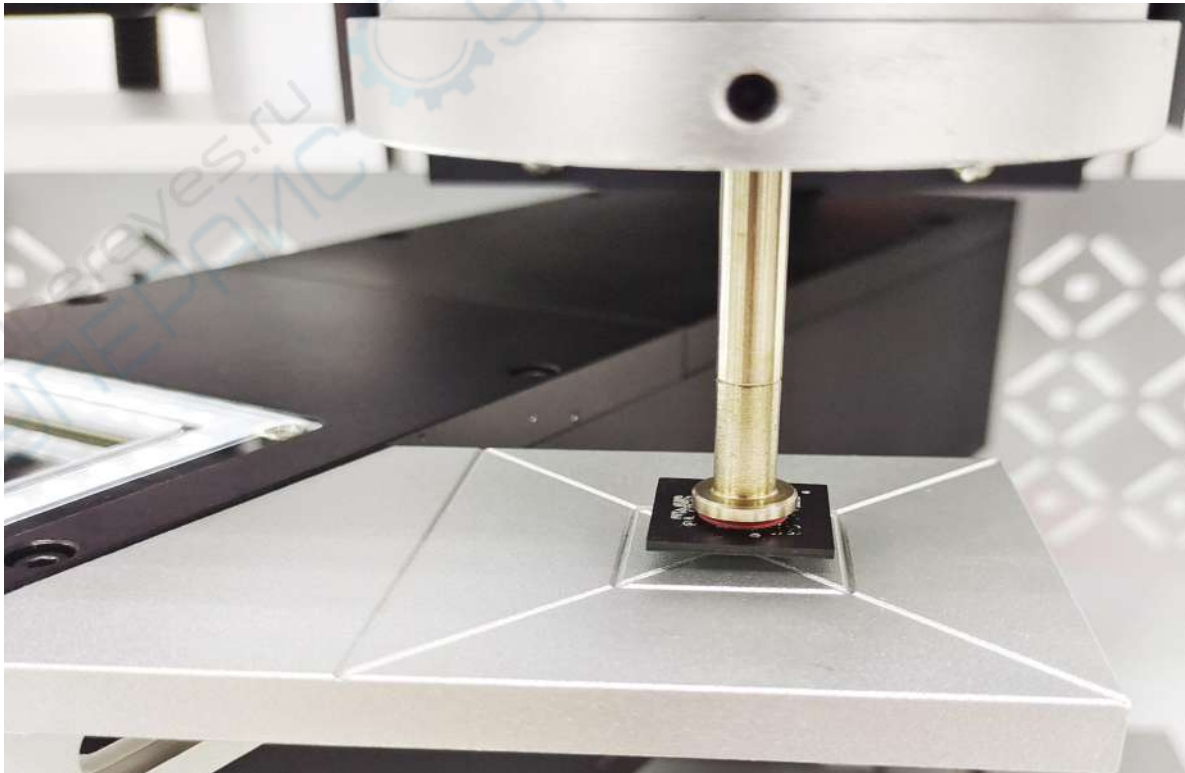
IV.Illustrate important functions



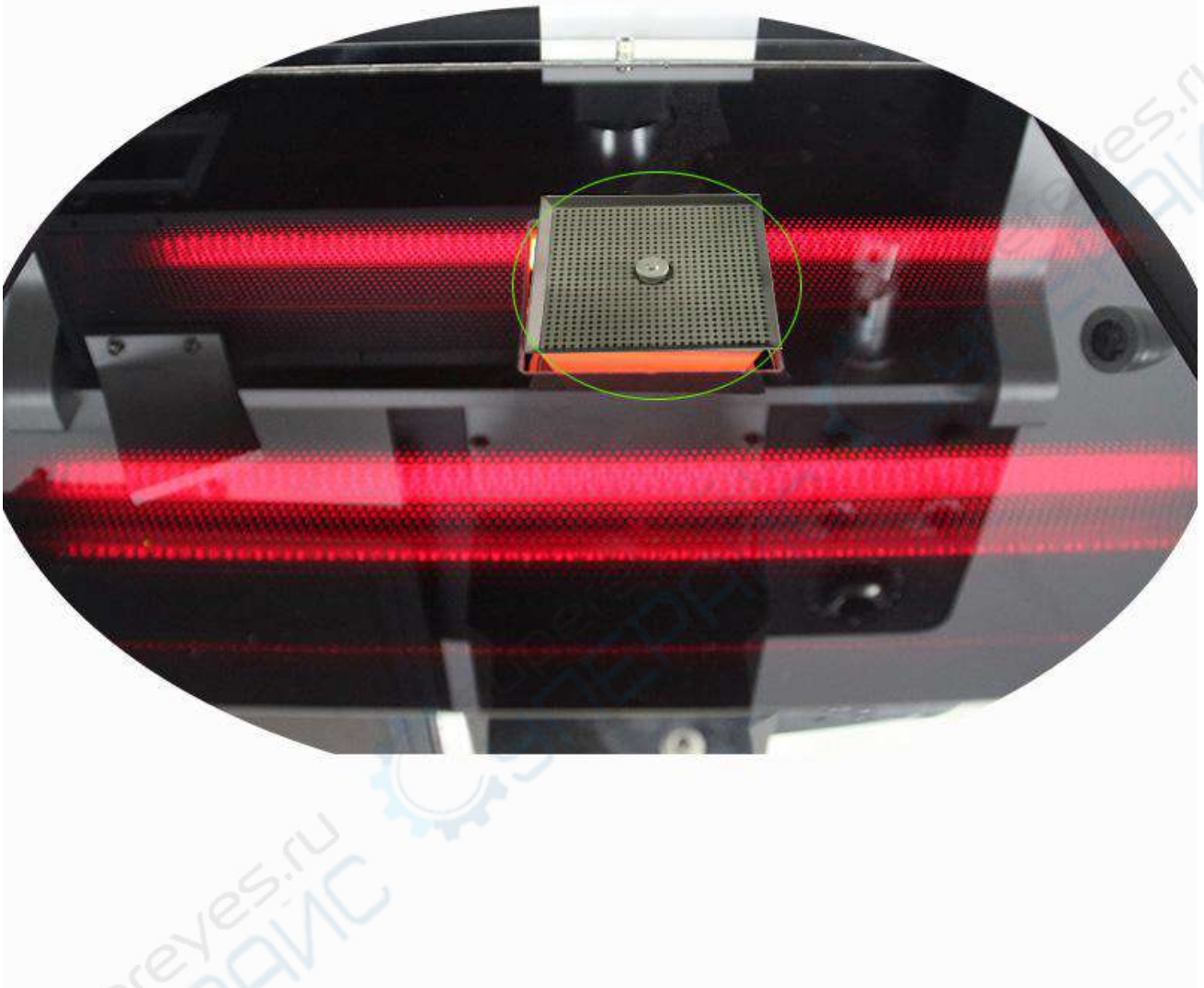
(Optical vision alignment, the mounting status is clear at a glance)



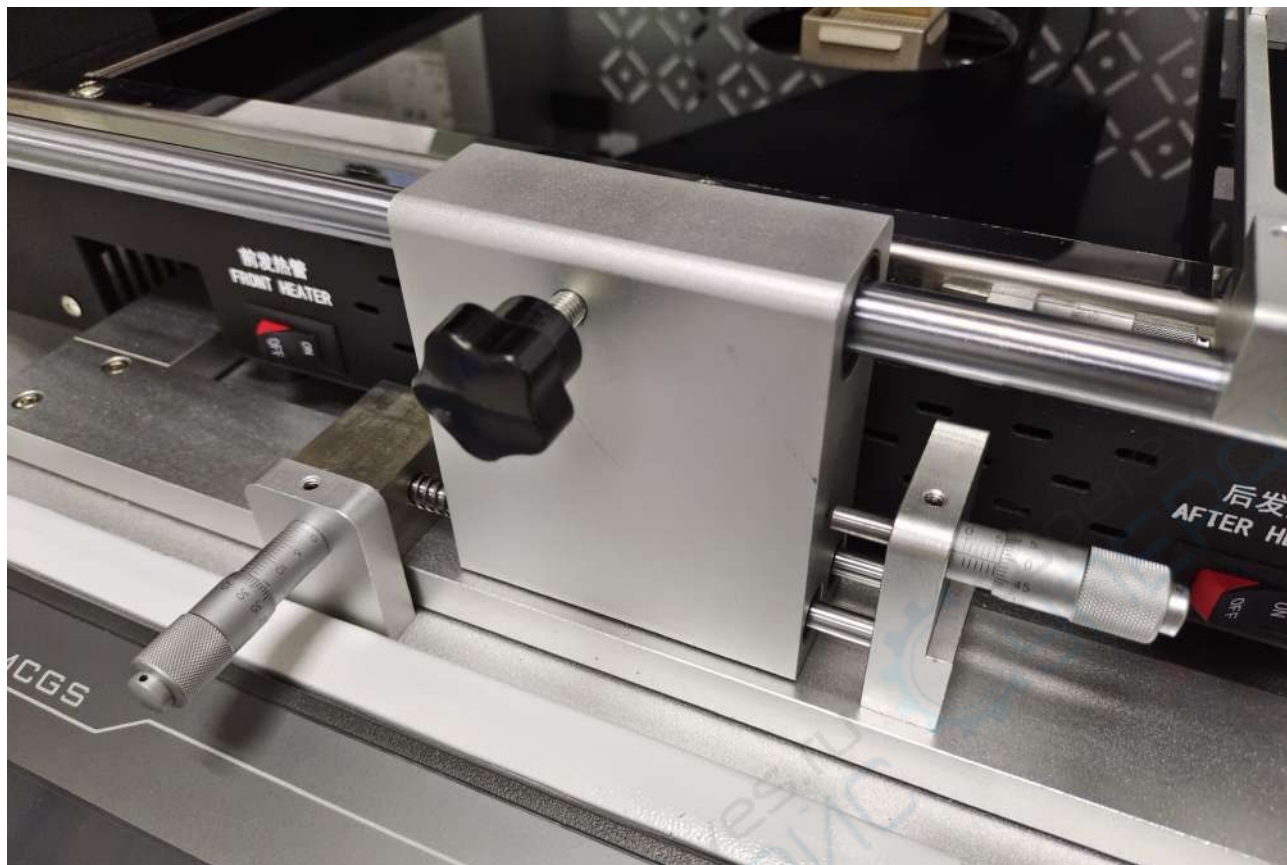
(Pick up the chip automatically)



(Automatic receiving and feeding system)



(Infrared heating tube heating)



(Micrometer adjustment function)





V.Dinghua advantage:

Shenzhen Dinghua Technology Development Co., Ltd. is a national high-tech enterprise integrating R&D, production, sales and service! We have the strength to provide you with high-quality products, perfect services and advanced technical support.

Because of the special industrial structure of Shenzhen, any technological products can be copied quickly, so any industry is mixed. Some companies concentrate on researching and developing products, and some companies use plagiarism and imitation to quickly make a fortune when the industry is booming. Wait for industry standards and maturity before transferring to another industry. Many small factories have only a few people who directly buy accessories and assemble them. They do not have any software and hardware research and development capabilities. They only make a few mature models. Any software and hardware problems must be dealt with by others. The quality is not guaranteed, and the after-sales service is very poor. Timely, this is very irresponsible to the customer. In contrast, the equipment produced by our Dinghua Technology has the following advantages:

1.Profession:

Since 2010, we have only focused on the R&D and production of BGA rework stations. After years of intensive development, the company has 38 patents and 97 quality control processes. The products are frequently upgraded, and we have always been consistent with the development of the industry.

2. Quality:

Product quality and user reputation are the basis for our survival, so we pay great attention to product quality. All electronic parts adopt well-known brands, such as MEAN WELL power supply, Omron relays, imported heating cores, etc., plus the production process Strict quality control, we implement full numbering during the manufacturing process, and each employee of the manufacturing department has his own number. Any process problem can be quickly traced to the corresponding worker. We implement the problem of who makes the employee. The principle of rewarding whoever is responsible and whose quality is stable, inculcate a quality-first concept to every employee, so as to ensure the stability and excellence of product quality.

3.After-sales:

We have our own professional team of software and hardware engineers and a team responsible for after-sales service. Any software or hardware problems can be quickly analyzed and dealt with in a timely manner. The software is upgraded for free for life, and the after-sales service is timely and guaranteed.



4. Working environment:

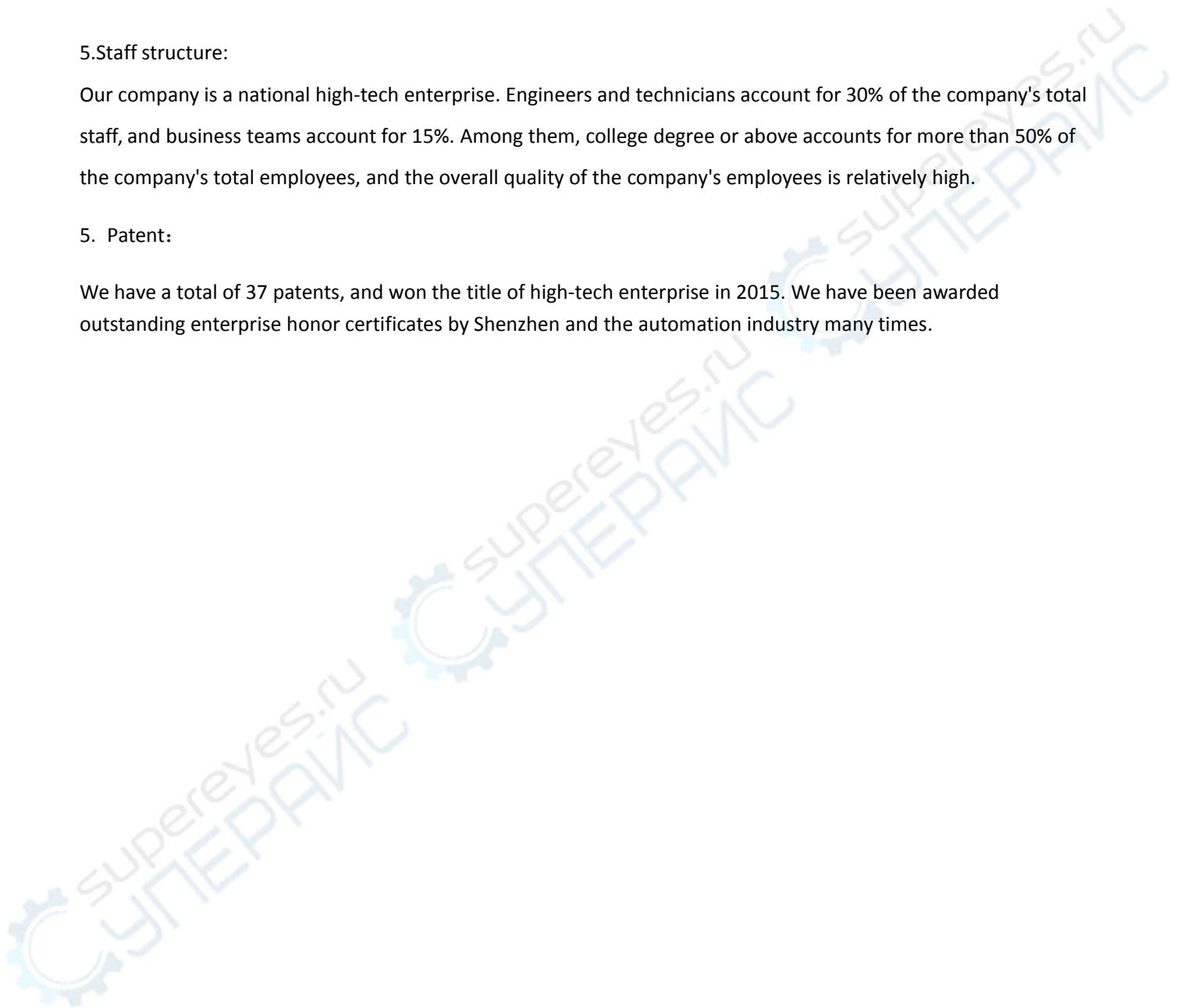
Because our company is invested and built by Singaporean businessmen, the company strictly implements the 6S system and strictly manages the quality of employees. The first thing all employees enter the factory is to train professional skills and 6S requirements. We believe that even the production environment is not well controlled. , How can it be possible to control product quality.

5. Staff structure:

Our company is a national high-tech enterprise. Engineers and technicians account for 30% of the company's total staff, and business teams account for 15%. Among them, college degree or above accounts for more than 50% of the company's total employees, and the overall quality of the company's employees is relatively high.

5. Patent:

We have a total of 37 patents, and won the title of high-tech enterprise in 2015. We have been awarded outstanding enterprise honor certificates by Shenzhen and the automation industry many times.





VI. Our customers:

Huawei, Lenovo Group, Gree Electric, BYD, Tencent, Shanghai Want, Gionee Mobile, Xiaomi, Xiamen Airlines, Chengdu Metro, Changlong Railway, Foxconn, Hikvision, Skyworth, DJI Innovation, Allianz Ruishi, Huijin Technology, Sichuan Changhong, OnCore Electronics (OnCore), RadiSys, Samsung, Beijing Second Academy of Aerospace, Shenyang Military Region 93115 Unit, Beijing Nuclear Science and Technology, Shenyang Institute of Automation, Chinese Academy of Sciences, Shanghai East China University of Science and Technology, Xi'an Electronics University of Science and Technology, Shandong University of Technology, Qingdao University of Science and Technology, Southwest University of Science and Technology, Lu'an Vocational and Technical College, Nanjing Institute of Aeronautics and Astronautics, Guangning Vocational and Technical College, Chongqing University of Posts and Telecommunications, Sichuan Neijiang Teachers College, Changsha Central South University, Beilid, Thailand Hui, Luchang Technology, Zhuhai Youte, Zhuhai Orbit, Zhuhai Huijin, VTech Group, GAC, Second Automobile, Great Wall Motor, ZTE, Aerospace Science and Technology 513, Aerospace Rocket Technology Research Institute 289 Plant, Fenda Technology, Baidu Fu Electronics, Songri Digital, Zhongnuo Technology, Allifeng Technology, Zhengwei Group, Yaojin Technology, Ruiyun Electronics, Efang Digital, Utepu Technology, Jiuzhou Electric, Horn Technology, Jinghua Electronics, Youxun Electronics, Jingcheng Technology, E Lutong, Zhongke Hisense, Gospel, Graduate School of Chinese Academy of Sciences, TCL, Mesaida Technology, Zhongmao Electronics, Yazhe Electronics, Popular Computer, Pulian Technology, Chongqing Aerospace Rocket Electronic Technology Co., Ltd. The company, Chongqing Cablecore Technology Co., Ltd., Sichuan Xinghong Electronic Technology Co., Ltd., etc. At the same time, the company's products are exported to more than 180 countries and regions in Europe, America, Southeast Asia, the Middle East and Africa.

VII: Contact

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