WDS650 BGA Rework Station with Triple-Zone Heating HD Optical Alignment and Touchscreen Interface for Precision BGA Repair

Our Product Introduction

Basic Information

- Place of Origin: Guangdong, China
- Brand Name: WISDONSHOW
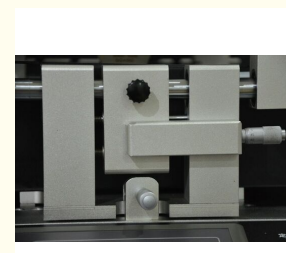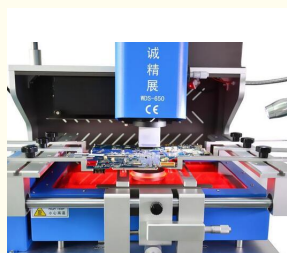- Minimum Order Quantity: 1
- Price: CN¥21,314.84-25,259.46

Product Specification

- Max Input Power: 6800
- Voltage: 220V, 110V
- Dimensions: L600 X W640 X H850mm
- Weight: 85kg
- Welding Mode: Hot Air, IR
- Total Power: Max 6400w
- PCB Size: Max 410*380mm, Min 10*10mm
- Chip Size: Max 70*70mm, Min 1*1mm
- Alignment System: Optical Lens +HD Industrial Camera
- Mounting Accuracy: ±0.01mm
- PCB Thickness: 0.3-5mm
- Operation Interface: Touch-screen Board
- Working Modes: 5
- Temperature Precision: ±1°C
- Material: Metal

More Images

WDS-650

Multi-functional

Product Description

WDS-650 BGA Rework Station

The WDS-650 BGA Rework Station is a high-precision system designed for reworking and rebonding BGA, QFN, CSP, and other surface-mounted chips. It is widely used for replacing and repairing BGA chips on devices such as laptops, smartphones, gaming consoles, and industrial control boards.

This professional-grade equipment features independent triple-zone heating, HD optical alignment, and a smart touchscreen interface, ensuring precise placement and uniform soldering for both lead-free and traditional soldering tasks.
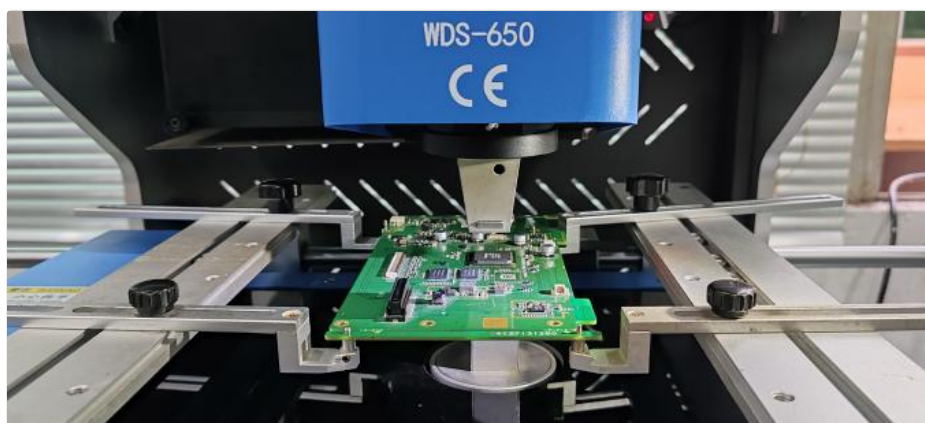

Operation System

Manual and precise operation mode for full control during rework

Capable of soldering, desoldering, picking, placing, and replacing various BGA chips

User-friendly interface with HD optical alignment and intuitive touchscreen

Temperature Control System

Supports 6-stage programmable temperature profiles for preheating, soaking, soldering, and cooling

±1°C precision with independent closed-loop control

High-accuracy K-type thermocouples for consistent reflow results

External temperature sensors monitor and calibrate real-time soldering curves

Safety Features

CE certified and compliant with international safety standards

Automatic power-off protection for abnormal operation

Dual over-temperature protection for stable performance

BGA Repair Process

How to Separate and Replace BGA Chips

Desoldering: Use hot air to safely separate BGA chip with precise temperature control

Pad Cleaning: Remove solder residue and thoroughly clean PCB pad area

Reballing or Replacement: Reball original chip or install new BGA component

Alignment & Positioning: Achieve accurate alignment using silk screen marks or HD optical camera

Soldering: Precisely mount and solder using triple-zone heating and programmable reflow profile

Product Images

Infrared Preheater (Bottom Heater 4000W)

- High temp. resistance ceramic glass prevents the chips from being dropped and burnt;
- Infrared heating makes the PCB board evenly being heated and prevents it from deformation;

Hot air Heater (Top Heater 1200W)

- Reflow vent designed nozzle helps the PCB board being heated evenly;
- The flow of top heater can be adjusted according to the chips;

Hot air Heater (Bottom Heater 1200W)

- The height of bottom heater can be adjusted to ensure the perfect heating and repair success rate.
- Customized nozzles are available;

Nozzle

- Top heater can be equipped with different sizes of nozzles to fit for different sizes of chips;
- Reflow vent designed nozzle helps the PCB board being heated evenly;
- Customized nozzles are available;

15'' HD Digital Display Monitor

- Effectively and clearly show the condition of alignment of soldering joint in 2 color points;
- Note: blue point is for IC chip while yellow point is for soldering point on PCB board;

CCD Optical HD Camera

- Brand: Panasonic
- Precision optical prism;
- 5 million pixels;
- Mounting accuracy within ±0.01mm;

Micrometer

- Slightly adjust the position of PCB board to ensure the precision alignment;
- Ensure the mounting accuracy within ±0.01mm;
- Effectively increase the success rate of repairing;

Micrometer

- Slightly adjust the angle of IC chip for precision alignment;
- Ensure the mounting accuracy within ±0.01mm;
- Effectively increase the success rate of repairing;

BGA Light Adjust & PCB Light Adjust

- Slightly adjust the brightness of the light of CCD lens to observe the alignment clearly;
- Effectively increase the success rate of repairing;

Zoom In & Zoom Out Buttons

- Adjust the resolution of points in the screen from 1X to 200X to observe the alignment clearly;
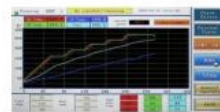- Effectively increase the success rate of repairing;

7'' Color Touch Screen

- 5 work modes and some common temperature curves are provided in the system;
- Chinese and English are already in the system, but Spanish, French and other languages are available;

Parameter Setting

- 8 temp. phases for soldering/desoldering;
- Users can set different temp. curves according to different chips;
- Time-saving: users can save multi temperature profiles for different PCB boards and name them;

Temperature Curve

- Instantly analyze the temp. on touch screen, which can avoid failed repairing and correct the temp. in time;
- Different colored curves mean different temperatures for different heaters and the heating chip;

Micrometer

- Slightly adjust the position of PCB board to ensure the precision alignment;
- Ensure the mounting accuracy within ±0.01mm;
- Effectively increase the success rate of repairing;

Micrometer

- Slightly adjust the angle of IC chip for precision alignment;
- Ensure the mounting accuracy within ±0.01mm;
- Effectively increase the success rate of repairing

CCD Place Control (In & Out)

- Press the button to control the camera move in or out conveniently to observe the image on the monitor

Suction with Sucker

- Pick up the chips automatically;
- Different sizes of nozzles and vacuum sucker work for different sizes of chips;
- Equipped with pressure testing device;
  the head of machine will stop declining automatically to protect the PCB from being damaged when the testing device detects pressure;

Technical Specifications

The Total Power	6800W
Upper Heating Power Supply	1200W
Lower Heating Power Supply	1200W
Lower IR Heating Power Supply	4000W （2000W controlled）
Power Supply	(Single Phase)　　　AC 220V±10　50Hz
Positioning Method	V-shaped slot, PCB bracket can be adjusted in any X and Y direction, laser positioning light for fast positioning.
Temperature Control	High-precision K-type thermocouple (Ksensor) closed-loop control (Closed Loop), independent upper and lower temperature measurement with a temperature accuracy of up to ±1 degrees
Electrical Appliance Selection	Highly sensitive touch screen + temperature control module + PLC + stepper driver
Maximum PCB Size	470×380mm
Minimum PCB Size	10×10mm
Number of temperature measuring interfaces	3个
Chip magnification	2-30 times
The PCB Thickness	0.3-5mm
Apply Chip Size	1*1mm-70*70mm
Minimum chip spacing	0.15mm
Maximum load for mounting	300G
Mounting accuracy	±0.01mm
Overall Dimensions	655×620×590mm
Machine Weight	Net weight 60kg

Applications

Laptop and computer board rework and repair

Game console applications rework and repair

Small and medium size electronics assembly factories

Medical equipment applications rework and repair

Automotive ECU and control unit repair

Light systems and LED applications

Home appliance and personal gadgets repair

Networking and communication equipment

Power supply and control PCB applications

STB Motherboard

PlayStation Motherboard

LED Module Motherboard

TV Motherboard

Laptop Motherboard

Computer Motherboard

Packaging & Shipping

Package: Individual standard export strong wooden box

Delivery: Within 1-2 work days after receiving full payment

Shipping: TNT, DHL, FEDEX, or by air or sea

Loading port: Shenzhen or Hong Kong

Company Information

Shenzhen Wisdomshow Technology Co., Ltd. was founded in 2011 by a team of experienced engineers and sales experts. Specializing in BGA rework stations and X-RAY inspection equipment, the company has grown rapidly through continuous R&D and technological innovation.

With ISO9001 and CE certifications, multiple patents, and strong customization capabilities, Wisdomshow serves clients across Asia, Europe, and North America. Our solutions are widely used in server motherboard repair, LED assembly, and smartphone production.

Service & Support

Contact: 24 hours technical support by email or phone

Warranty: One year free warranty

Technology Support: Demo operation videos and on-site training available

Documentation: Friendly English user manual provided

Pricing: Competitive pricing with agency discounts

Certificate Of Conformity

BORY

No.: BAC220590145S

Applicant...............: Shenzhen Wisdomshow Technology Co.,Ltd.

Address................: 3F Eastern, 2F Eastern Building 7, Haosi Western Industrial Park, Heyi Community, Shajing Town, Bao'an District, Shenzhen, China

Manufacturer.........: Shenzhen Wisdomshow Technology Co.,Ltd.

Address................: 3F Eastern, 2F Eastern Building 7, Haosi Western Industrial Park, Heyi Community, Shajing Town, Bao'an District, Shenzhen, China

Trademark.............: N/A

Product................: BGA rework station

Model(s) ....: WDS-750, WDS-650, WDS-620, WDS-800A, WDS-1250, WDS-520, WDS-580, WDS-680, WDS-700, WDS-900, WDS-1390

Directives.............: Machinery Directive 2006/42/EC

Standards.............: EN ISO 12100:2010
EN 60204-1:2018

Report No............: B2205TR90145S

Remark: The certification is only valid for the equipment and configuration described, in conjunction with the test data detailed above.

The CE mark as shown beside can be used, under the responsibility of the manufacturer, after completion of an EC Directive of Conformity and compliance with all relevant EC Directive.

CE

Approved by/Date: Usher Kuang May 31, 2022

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501, Building 10, Xinlitang Building, Gangbei Industrial Park, Huangtian Community, Hangcheng Street, Baoan District, Shenzhen, Guangdong, China.
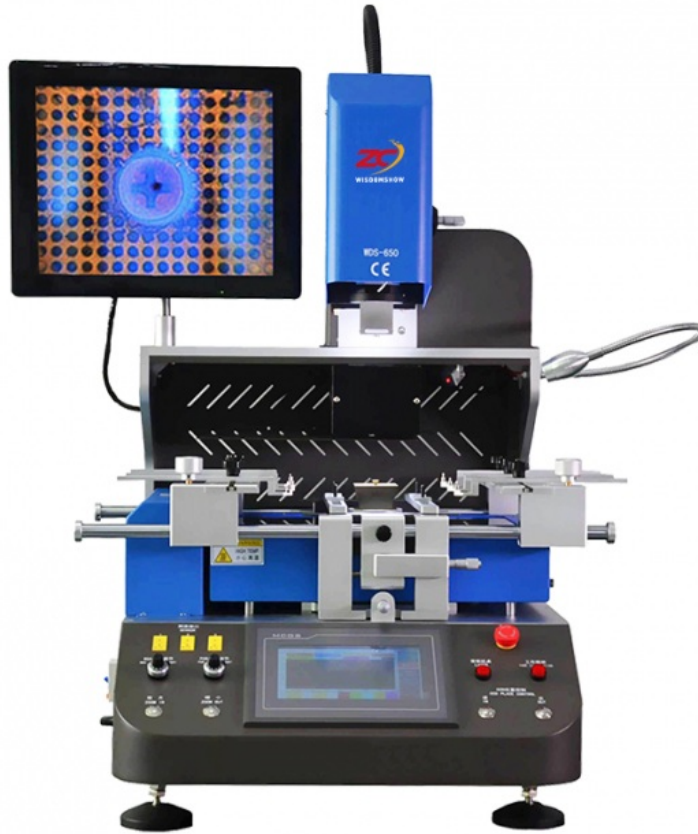
Customer Feedback

Richard - Turkey: "Your best price and high purity product is so competitive in my country. Cooperating with you is wonderful!"

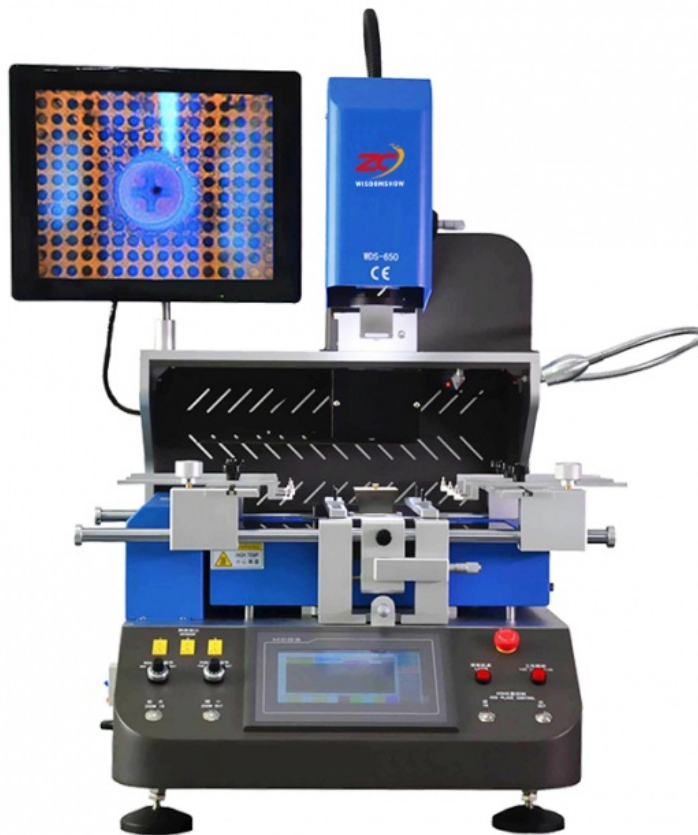**Robert - Australia:** "Your packing is discreet and perfect. I will order more from you soon."

Corentin - Brazil: "I have cooperated with you for many times. Your product quality is great, that's why I keep buying from you."
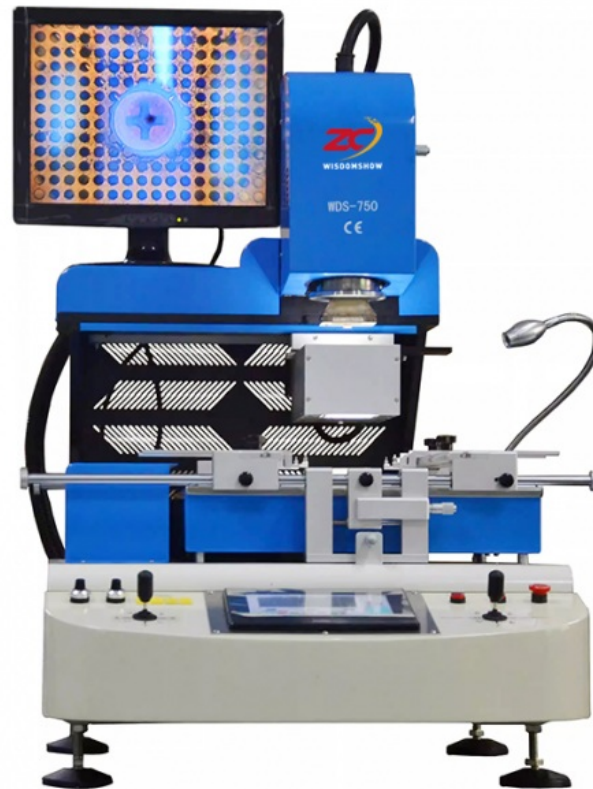
Related Products

WDS-S7

WDS-620

WDS-650

WDS-750

WDS-800A

WDS-1250

Order Information

For any questions please send an inquiry or chat with us. We will be glad to service you!

Contact us for the best pricing and order your WDS-650 BGA Rework Station today!