QUICK SOLDERING

INFRARED BGA REWORK SYSTEM

QUICK/EA-H15

Features

- **Reflow infrared rework system**
  Infrared sensor detects the temperature of BGA surface, close-loop control, even heat distribution.

- **PL precision alignment system for placement**
  PL part uses dichromatic vision alignment, which can help the solder balls and pad coincide with each other well, easy operation.

- **RPC reflow monitoring camera**
  BGA solder balls can be observed from different angles during the melting process, it can provide critical assistance to catch accurate and reliable process curve.

- **IRSOFT software**
  Be connected with PC via IRSOFT, record and analyze the whole process, create curves.

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Specifications

IR reflow system

General Power	2800W (Max)
Bottom Preheating Power	400WX4=1600W(Dark infrared heater)
	500WX4=2000W(High infrared heater, optional)
Top Heating Power	120WX6=720W(Infrared heating tube)
Top Heating Size Range	20~60 (X,Y direction adjustable)
Bottom Preheating Size	290X290 mm
Max PCB Size	400mmX400mm
Communication	USB(connect with PC)
Temperature Sensor	Non-contact infrared sensor
Weight	Around 55 Kg
Dimensions	850(L)X650(W)X730(H)

PL

Camera	22X10 times magnifying,12V/300mA,Horizontal resolution
	480 lines, PAL format
Prism Size	50mmX50mm
BGA Size Range	2X2~60X60(mm)
Video Output Signal	Video signal

Reflow Camera

RPC	22X10 times magnifying
	Horizontal resolution: 480 lines
	PAL format

Video Card

Card	Four-channel Analog Video Input
Video Soft	Professional Video Software

Computer

Brand	Lenovo(Optional)

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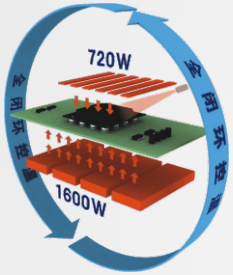


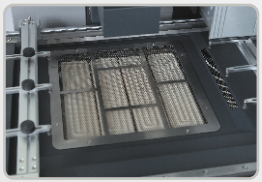
IR part uses open dark infrared heating, through non-contact infrared sensor senses BGA surface temperature, closed-loop control to ensure the precise temperature process, heat distribution.

Top Heater

Top heat by the infrared tube of power 720W and wavelength 2-8μ,can adjust the size of heater window according to the BGA size.

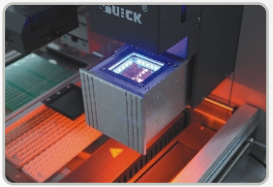
Saving cost, no need nozzle.

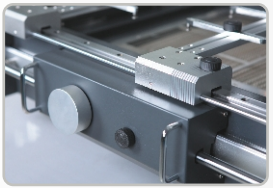
When the process ends, the vacuum automatically generate and pick up BGA component and automatically spring back to its original position.

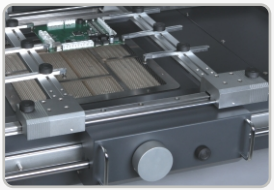


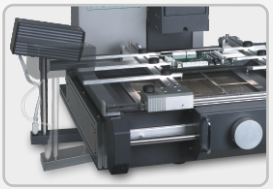
Bottom Heater

The bottom has four groups of infrared ceramic heating plates, the power up to 1600W,it can preheat larger PCB, make PCB heated evenly to prevent PCB distortion and warping.









Optical Prism Alignment

PI part uses optical prism alignment, the upper illumination is the blue light, the bottom is the orange light, the light can be adjusted. BGA balls and PCB solder pads are consistent by light refracted.

Solder balls and pads clearly display on the monitor by camera gathering, through adjusting the knob of X,Y axis and controlling components, that can overlap completely the blue solder balls and orange solder pads, and completes the alignment job.

Alignment Adjustment

Through X,Y,Z three angles of adjustment, that can achieve the most accurate alignment result.BGA chip can rotate 360 degree by electric control.

PCB Jig

Irregular PCB may use different jigs,

The bottom of large PCB is supported by the jack to prevent distortion.

RPC

RPC reflow camera is used to monitor the thawing and joint formation of soldering balls on reflow process.RPC can be up and down, move around and meet all angles of observation.

Before BGA solder balls collapse

After BGA solder balls collapse

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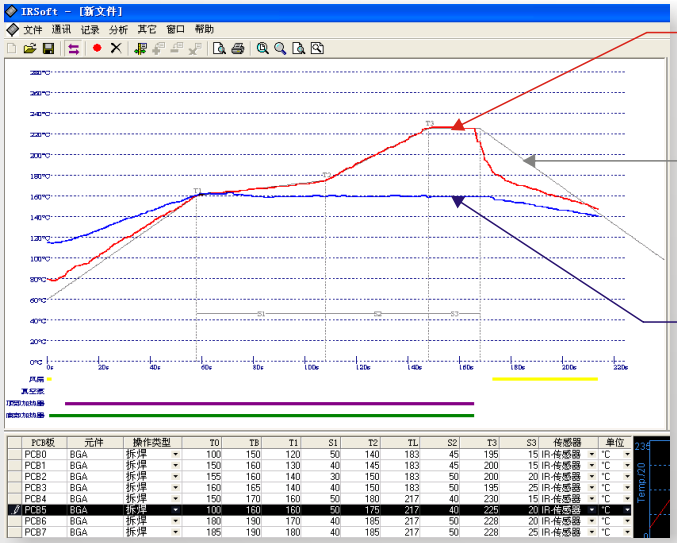
IRSOFT is designed for Quick EA-H15 , through IRSOFT, you can view, store, and analyze the temperature profile for each soldering process.

- BGA reflow process generally consists of five stages: preheating, temperature preserving、activation、soldering、cooling. The temperature and temperature rise rate in temperature preserving, activation, soldering area are particularly important.
- Temperature Preserving Phase: Eliminate the temperature difference between elements and PCB ,prevent the PCB deformation and component damage.
- Activation Phase: let flux full activity to help soldering.
- Soldering Phase: The heater heats up to the peak temperature, BGA balls combine with soldering pads, achieve real soldering result.



QUICK SOLDERING

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Features

- Less training time needed to reduce operational obstacles.
- High efficiency, Excellent reliability.

One- key desoldering

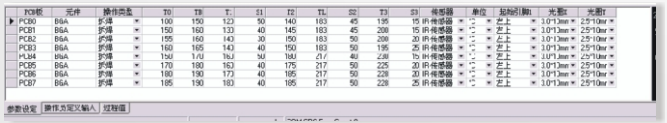
Chip Soldering

1.Automatically move to heating position
2.Automatically start designated process of soldering curve.
3.Automatically cool after soldering process finished.

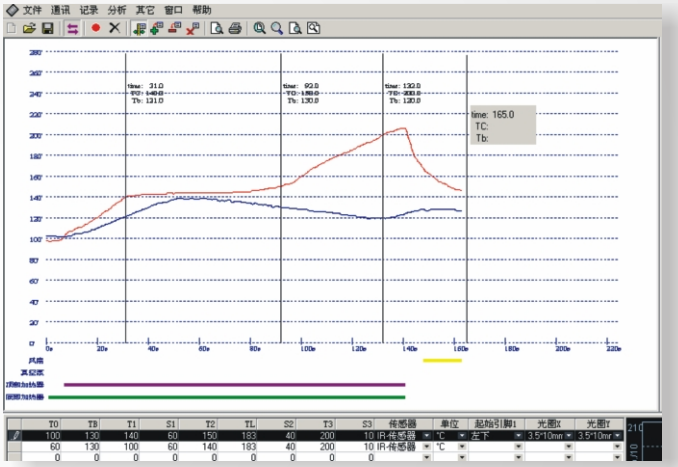
Chip Desoldering

1.Automatically move to heating position.
2.Automatically start designated process of desoldering curve.
3.Automatically pick up IC after desoldering process finished
4.Automatically cool after desoldering process finished

IRSOFT Operational Interface



- Set the process parameters at this interface, and can also complete the upload, download, copy and paste of the data.



- Can set the login password.
- Can set the protection password for the parameters, and set limit on parameter modification.
- Fast upload function available, press “start” to begin the current process.
- Can analyze temperature curve.
- Review the historical process parameters and temperature curve.