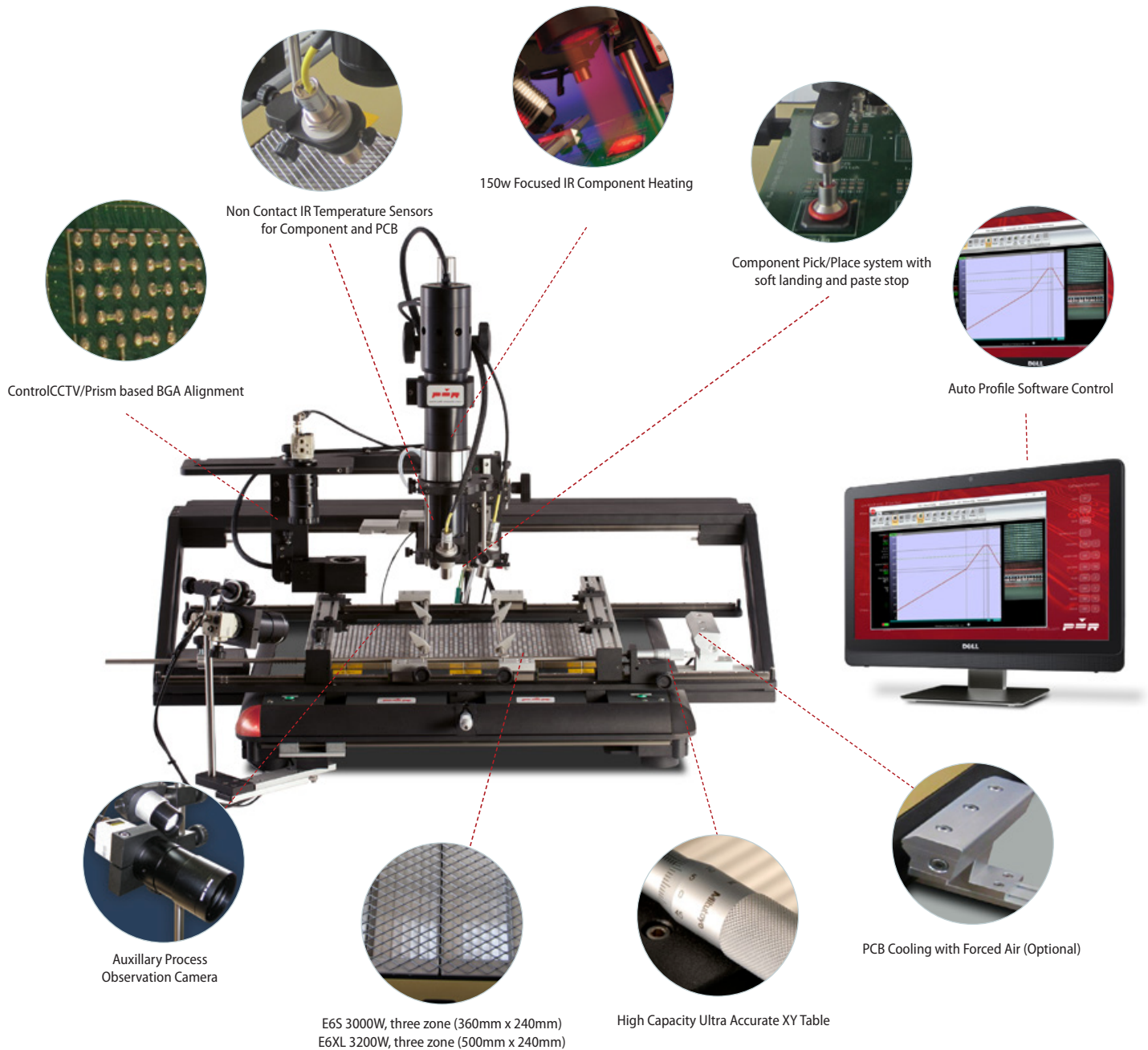


PDR IR-E6 EVOLUTION SERIES

PDR's Focused IR SMT/BGA Rework Station
For Medium to Large PCB, BGA Rework

Trusted by Experts





E6S 3000W, three zone (360mm x 240mm)
E6XL 3200W, three zone (500mm x 240mm)

High Capacity Ultra Accurate XY Table

PCB Cooling with Forced Air (Optional)

Advanced Features

North American specifications may differ

- **Advanced Focused IR component heating**
150W, lens based Focused IR heating with adjustable image system
- **Quartz IR PCB preheating**
E6S 3000W, three zone (360mm x 240mm heating area)
E6XL 3200W, three zone (500mm x 240mm heating area)
- **Precision Component Pick and Placement**
Advanced Professional vacuum placement system
- **Component Nest/Flux Application Facility**
Integrated nest with flux dip tray or componen print frame
- **Precision PCB Handling**
Advanced Professional PCB table with macro-micro X/Y
- **Component Temperature Sensing**
Standard non-contact IR temperature sensor
- **PCB Temperature Sensing**
K-type wire thermocouple
Optional non-contact IR temperature sensor
- **Advanced Thermal Process Control**
Software based auto profile thermal control
- **Camera/Prism Based BGA/CSP/QFN Alignment System**
Split beam prism system for simultaneous PCB/component viewing
- **Auxiliary Process Camera (Optional)**
Auxiliary process observation camera
- **Forced Air PCB Cooling (Optional)**
Highly effective, integral PCB cooling with air knife system

Ultimate Performance, BGA Rework Station for medium-large PCBs upto 24"/620mm



Click above for video link

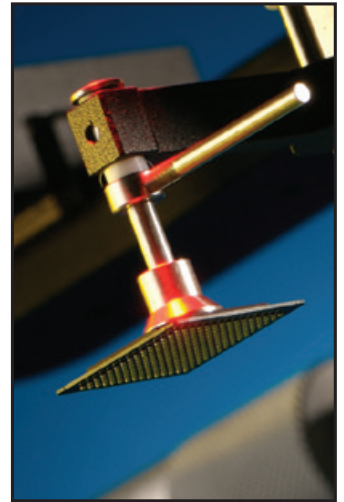
The IR-E6 Evolution rework system is made in the United Kingdom with only the finest components for optimum precision. The PDR IR-E6 is our largest system and one of the best performing BGA Rework Stations worldwide.

The IR-E6 is very high powered with a multi-zone, PCB preheater and is designed to rework medium to large PCB assemblies with upto a 24"/620mm PCB capacity. It is loaded with advanced features delivering many benefits including the highest performance and soldering quality available anywhere, yet it remains simple to set up and use.

BGA rework without the complications

The PDR IR-E6 SMT/BGA rework station, using PDR's patented Focused IR technology, has been specifically designed to cope with the challenges of repairing today's medium to large PCB assemblies.

The station is tool free, gas free, instantly/precisely controllable, clean, modular, upgradeable and produces 100% yield BGA rework without any complications. It provides the extremely high levels of profiling and process control necessary for the effective rework of even the most advanced packages, including SMDs, BGAs, CSPs, QFNs, Flipchips and is ready for 0201 and lead-free applications. The IR-E6 is well specified yet can be easily configured to your exact requirements, with a good range of advanced features to choose from, allowing the operator to quickly and safely rework all types of components without overheating the component, adjacents or the PCB. It uses all the proven attributes of PDR's Focused IR technology, first introduced in 1987 and now used worldwide by over 4000 customers.



Simple BGA rework procedure

BGA rework poses the problem of accessing hidden interconnects in a high density environment. Consequently, it requires a station that is able to access the hidden joints without affecting neighbouring components. A station that is safe, gentle, adaptable and, above all, simple to operate. The IR-E6 is such a station. It is so easy to operate that technicians are able to instantly achieve excellent process control for BGA/SMT rework without the complexities and frustrations normally associated with 'high-end' rework stations.

Paste - Place - Reflow

With the aid of excellent mechanics, optics and control, operators can simply pick up the fluxed BGA from the nest, align it, place it onto the PCB's pads and then reflow with the station's accurate PC based, closedloop component and PCB temperature control.

Details and specifications of advanced features available

- **Advanced Focused IR component heating**

150W, lens based Focused IR heating with adjustable image system
 PDR lens attachments with IR image from 4 to 70mm diameter
 Reworks all SMDs/ BGAs/QFNs/CSPs including 0201s + lead free applications

- **Quartz IR PCB preheating**

High power, medium wave quartz IR
 Large area IR PCB preheater system
 E6S - 3000W, three zone, (360mm x 240mm heating area)
 E6XL - 3200W, three zone, (500mm x 240mm heating area)

- **PDR lens attachments**

F150 (Ø4 - 18mm spot size) optional
 F200 (Ø10 - 28mm spot size) optional
 F400 (Ø12 - 35mm spot size) optional
 F700 (Ø25 - 70mm spot size) standard

- **Advanced Professional Vacuum Placement System**

With precise 'pick and place' action, Y/Z axis movement and rotation
 Soft component landing, Z-axis stop, LED guidance for paste placement Interchangeable pick-up heads for different applications

- **Component Nest for Precision Pick-up and Flux Application**

With integrated nest with 'component print frame', dip tray or mini stencil paste-head facility for flux and solder paste application.

- **Advanced Professional Macro-Micro X/Y PCB Table**

Precision micrometer (micro) X/Y and micro rotation control
 +/- 10 microns (.0004") movement in X/Y directions
 Macro movement in X/Y directions
 Up to 18" x 24" (460mm x 620mm) PCB capacity with lockable X/Y axis
 X/Y Table has 1" x 1" micro- movement plus macro adjustment
 System has a gantry feature. Topside of machine moves in X and Y direction

- **Component Temperature Sensing - Non-contact, IR Sensor**

Manually adjustable, K-type non-contact IR sensor, Ø7-10mm spotsize
 Real time monitoring of component temperature throughout process

- **PCB Temperature Sensing - Non-contact, IR Sensor**

Manually attached K-type thermocouple probe
 Optional non-contact IR sensor with real time temperature sensing

- **Auto Profile Process Control Software**

PDR ThermoActive software suite
 Digital controller with multi-functional features
 Advanced, Windows 7+ ThermoActive software suite
 Two channel, real time, closed loop component and PCB temperature control
 'Auto-profile' temperature profiling, data logging and reporting
 Multi K-type thermocouple (x4) capacity for temp/time testing

- **Camera/Prism Based BGA/CSP/QFN Alignment System**

Split beam prism system for simultaneous PCB/component viewing
 Integral LED lighting system with illumination level control
 Full colour compact camera and flat screen colour monitor
 High quality zoom lens with up to x50 magnification
 Precise X/Y axis mounting system

- **Auxiliary Process Camera (Optional)**

Auxiliary process observation camera
 Integral LED lighting system with illumination level control
 Full colour compact camera with rotation movement
 High quality zoom lens with up to x50 magnification

- **Forced Air PCB Cooling (Optional)**

Highly effective, integral PCB cooling with air knife system
 Switched compressed air flow, directed under the PCB

Bench Top Requirements

Top heat power	150W IR
Back heater power	3000-3200W IR
Voltage/frequency	208-240 volts 50/60Hz, up to 3KW
Typical components	CSPs, BGAs, uBGAs, QFNs, QFPs, PLCCs, SOICs, small SMDs
Bench area	2000mm (w) x 1000mm (d)
Weight	100 Kg

The above features are mostly optional and also, PDR reserves the right to improve or change specifications without giving notice.

North American specifications may differ

PDR System	IR-C3 Series		IR-D3 Series		IR-E3 Series			IR-E6	
● = Standard Feature ○ = Optional Feature									
Advanced Focused IR Component Heating	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Focused IR Lens System	●	●	●	●	●	●	●	●	●
F150 - Ø6-18mm - Lens Attachment	○	○	○	○	○	●	○	○	○
F200 - Ø10-28mm - Lens Attachment	○	○	○	○	○	●	●	●	●
F400 - Ø12-35mm - Lens Attachment	○	○	○	○	○	○	○	○	○
F700 - Ø20-70mm - Lens Attachment	●	●	●	●	●	○	●	●	●
Quartz IR PCB Preheating	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
750W, single zone (120mm x 120mm heating area)	○	○	○	○	○	○	○		
2000W, single zone (240mm x 240mm heating area)	●	●							
2250W, two zone with 750W Micro PCB Booster (240mm x 240mm heating area)			●	●	●				
2800W, three zone (240mm x 360mm heating area)									
3000W, 3 zone (240mm x 360mm heating area)								●	
3050W, three zone with 750W Micro PCB Booster (240mm x 360mm heating area)					○	●	●		
3200W, three zone (500mm x 270mm heating area)									●
Component Pick and Placement	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Venturi Based High Power Vacuum Upgrade	○	○	○	○	○	●	○	○	○
Handheld vacuum placement system	●	●							
Standard vacuum placement system (Z-axis and Rotation)	○	○							
Professional vacuum placement system (Z-axis, Rotation and Soft Landing)			●	●					
Advanced Professional vacuum placement system (Y/Z-axis, Rotation and Soft Landing)					●	●	●	●	●
Component Nest/Flux Application Facility	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Handheld flux dip tray or component print frame	○	○							
Jaw mounted nest with flux dip tray or component print frame			●	●		●			
Integrated nest with flux dip tray or component print frame					●		●	●	●
PCB Handling (PCB Capacity)	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Portable Benchtop PCB workholder (12" x 10"/300mm x 250mm)	●	●							
Professional PCB table with micro X/Y (12" x 12"/300mm x 300mm)			●	●					
Advanced Professional PCB table with macro-micro X/Y (18" x 12"/450mm x 300mm)					●	●	●		
Advanced Professional PCB table with gantry/macro-micro X/Y (18" x 12"/450mm x 300mm)								●	
2Advanced Professional PCB table with gantry/macro-micro X/Y (24" x 18"/620mm x 460mm)									●
Component Temperature Sensing	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Standard non-contact IR temperature sensor (Pyrometer) - Ø7mm+ Spot	●	●	●	●	●	●	●	●	●
PCB Temperature Sensing	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
K-type wire thermocouple	●	●	●	●	●	●	●	●	●
Standard non-contact IR temperature sensor (Pyrometer) - Ø7mm+ Spot	○	○	○	○	○	●	●	○	○
Advanced Thermal Process Control	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Digital controller based thermal control	●								
Software based auto profile thermal control		●	●	●	●	●	●	●	●
Barcode scanner (profile selection)		○	○	○	○	○	○	○	○
Camera Based Vision Systems	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Camera/Prism Based BGA/CSP/QFN Alignment System			○	●	○	○	○	○	○
Auxillary Process Observation Camera			○	○	○	○	○	○	○
Camera/Prism Based BGA/CSP/QFN Alignment System USB Interface			○	○	●	●	●	●	●
Auxillary Process Observation Camera USB Interface			○	○	○	●	●	○	○
Forced Air PCB Cooling	IR-C3S	IR-C3i	IR-D3i	IR-D3S	IR-E3S	IR-E3M	IR-E3G	IR-E6S	IR-E6XL
Highly effective, integral PCB cooling with air knife system					○	○	○	○	○



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