

APR-5000-DZ Array Package Rework System

Available
July 1, 2007



Dual convection heating for lead-free and high thermal demands

This latest addition to the APR-5000 Platform is designed to facilitate rework of high thermal demand boards, including lead-free and multi-layer assemblies, up to 12" x 12" (305mm x 305mm). This system meets all critical requirements with highly targeted and well controlled heating on the board assembly.

Considered ideal for small, high density boards used in products such as mobile phones, handheld instruments and personal media players, it enhances and enables fast ramp and tighter delta temperature control without affecting adjacent and underside components.

The APR-5000-DZ System has a US Patented, dual convection bottom-side heater that consists of both a large area and small area (localized) heater. When used together with the top-side convection heater during rework, faster heating rates with small temperature deltas are achieved.

In addition, the rework process is supported with precision alignment control and an integrated vision system. A unique, new strobe light facilitates viewing the dual image of both component and board.

The application software provides you highly intuitive, easy to use profiling tools. Once you establish profiles, they can be saved and shared across APR-5000 and APR-5000-DZ systems with cross-system repeatability to 5° C.



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Features	Benefits
Powerful & capable for today's challenges 200-240VAC 2600W of total power	Reliable and repeatable in addressing lead-free requirements: higher reflow temp and tighter temperature control.
Backward compatible profiles	APR-5000 profiles are thermally compatible and can be used in APR-5000-DZ Systems.
Dual zone preheating	More precise delta temperature control and faster temperature ramp on reworked devices. Minimizes adjacent, underside components from thermal damage when bottom nozzles are used.
Dual zone cooling	Fast cooling when dual zone fans are selected to be on simultaneously during the cooling stage of profile.
0201/0402/0605/ μ SMD tape feeder rework built in software sequence	Computer script to guide operator through picking, aligning, placing and reflowing 0201/0402/0605/ μ SMD devices from tape feeders.
Allows PDF document to be associated with process files	To improve operation efficiency, operator instructions can "pop" up before starting process.
Top & bottom strobe light control	Improves contrast between reworked device and land pattern during alignment.

Technical Specifications

APR-5000-DZ / -TAB	
Input Voltage	200-240 VAC, 50/60 Hz 20 Amp Single Phase
Power Consumption	
System Total	2600 W
Pre-Heater	1800 W
Inner Zone	900 W
Outer Zone	1800 W
Reflow Heater	550 W
Temperature Control Type	Closed-Loop Control (RTD Sensors)
Maximum Source Temperature	
Reflow Head	400°C (752°F)
Pre-Heater	350°C (662°F)
Airflow Control	Pre-Set to 8,16 & 24 l/min
Supply	Self-Contained Pump
Nitrogen Input	Standard Feature (requires 65psi or 4.6 bar)
Component Handling	
Maximum Size	1.4" x 1.4" (35mm x 35mm)
Minimum Size	0.020" x 0.010" (0.51mm x 0.25mm)
Maximum Weight	55g (1.94oz)
PCB Handling Capability	
Maximum Size	15" x 9" (381mm x 229mm)
Rework Area	9" x 12" (229mm x 305mm) 12" x 12" (305mm x 305mm) w/APR-LRK Large Rail Kit
Optional large rail kit (APR-5000-DZ only)	
Aligned inner preheater and reflow heater	8" x 8" (203 mm x 203 mm) not suggested without XY table
Maximum Thickness	0.25" (6mm)
XY Table	Standard on APR-5000-DZ-TAB Optional on APR-5000-DZ
Vision	
Maximum Field of View	1.4" x 1.4" (35mm x 35mm)
System Dimensions	
W x D x H	19" x 30" x 30" (483mm x 762mm x 762mm)
Weight	130lbs (60Kg)
System Warranty	1 Year (Excluding Consumables)
Agency Approvals	CE cETLus

Systems

APR-5000-DZ
200-240 VAC Array Package Rework System

APR-5000-DZ-TAB
200-240 VAC Array Package Rework System with XY Table

Systems Include

VNZ-12	Vacuum Pick-Up Nozzle 12mm O/D
VNZ-08	Vacuum Pick-Up Nozzle 8mm O/D
VNZ-05	Vacuum Pick-Up Nozzle 5mm O/D
VNZ-03	Vacuum Pick-Up Nozzle 3mm O/D
VNZ-01	Vacuum Pick-Up Nozzle 1mm O/D
FS-APR	PCB Support Finger Short (4 included)*
FSL-APR	PCB Spring Support Finger Long (4 included with APR-5000, 8 with APR-5000-XLS/XL)
UBS-APR	Under Board Support*
APR-TC3	Color Fine Gauge Thermocouples (includes 3)*
19782	Adjustable BGA Centering Nest**
20987	Adjustable CSP Centering Nest
20534	Squeegee Blade Holder for Printing
SOFT-APR-5000-DZ	Installation Software***
Cables	Power, Communication & Video Cables



APR-5000-DZ



APR-5000-DZ-TAB

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