

EMERALD SERIES

**LCD/ PDP TAB-REPAIR SYSTEMS FOR ACF-TACKING,
ACF-FINAL BONDING AND HBR-SOLDERING**

- *Medium to Large LCD/
PDP panels*
- *Different TAB sizes
and shapes*
- *Fine pitch alignment*
- *3 bonding techniques
in one system*

UNITEK EAPRO offers a full product line of LCD/PDP TAB-Repair systems. These systems are designed for a wide variety TAB's and can handle panel sizes ranging from 6" up to 60". This highly flexible system can be used for ACF-Tacking, ACF Final Bonding and Hot Bar Reflow Soldering.



Emerald system for panel sizes up to 35"

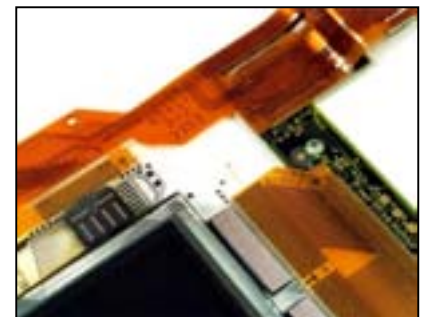
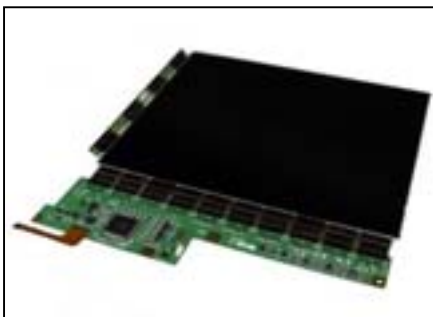
MAIN SYSTEM FEATURES AND OPTIONS

Features

- Uniflow pulsed-heated control with graphical data output and remote programming provides targeting heating and precision temperature controls.
- High precision motorized bonding head with programmable speed and force profiles ensures easy and quick access and an ultra consistent process.
- Dual upwards looking cameras for fine pitch alignment (down to 30 microns).
- Track and marker recognition while Hot Bar is on top of the bonding position.

Options

- Floating flipper construction for unlimited PCB sizes and fine adjustment in XYZ- and R-direction.
- Single downwards-looking camera with line generator for easy bonding position recognition.
- Bonding head on moveable arm for bonding to both glass and PCB.
- Glass support block for bonding to the ITO tracks and a separate Stainless Steel support block on adjustable slide for bonding to the PCB.
- Ergonomically designed with separate loading/unloading position.
- Constant Heat Control
- ESD-safe and clean room compatible.



SYSTEM SPECIFICATIONS

Dimensions mm (Inches)	(HxWxD): 1400 x 2000 x 820 (55" x 79" x 32")
Weight	550Kg (1213 lbs.)
Panel sizes mm (Inches)	152.4 up to 1524 (6" up to 60") diagonal
TAB sizes Length x Width mm (Inches)	5 x 20.5 – 27 x 35.5 (0.19 x 0.81 – 1.07 x 1.40)
Thermode (Hot Bar) Type	3D Thermo-Plane (different sizes available)
Thermocouple type	K-type
Temperature Controller	Uniflow Power Supply
Head options	PH500, PH1250, SH500, SH1250
Air supply PSI (bar)	80 – 100 psi (6 - 8), dry and filtered air
Power consumption	16A, 110VAC, 50/60 Hz (Hot-Bar ≤ 60 mm) 16A, 230VAC, 50/60 Hz
Operating temperature	15 – 40 °C [60 – 104 °F]

BONDING HEAD SPECIFICATIONS

Features/Head Module	SH500	PH500	SH1250	PH1250
Head actuation method	pneumatic	motorized	pneumatic	Motorized
Force Range	7 - 112 lbs., 30 - 500N 3 - 5Kgf		56.2 - 281 lbs., 250 - 1250N 25.5 - 127.5Kgf	
Hot Bar Stroke	25 mm (.98 Inch)			
Appropriate Hot Bars (Thermodes)	Thermo-Plane (to suit application)			
Max. Hot Bar Length mm (Inches)	Up to 50 (1.7)		Up to 100 (3.94)	
Thermocouple Type	K-Type			
Bonding Force	adjustable	programmable	adjustable	programmable

UNIFLOW PULSED HEAT SPECIFICATION

Weight	26.31 kg [58 Lbs]
Dimensions	411 [16.2 Inch] depth x 319 mm [12.6] height x 246 [9.7] width
Temperature range preheat	60 – 300 °C [140 – 572 °F]
Temperature range reheat	60 – 600 °C [140 – 1112 °F]
Time period preheat	0 to 99.9 seconds or continuous (0.1 second increments)
Time period rise time	0 to 9.9 seconds (0.1 second increments)
Time period heat time	0.1 to 99.9 seconds (0.1 second increments)
Temperature accuracy	± 2 % of reading or ± 6 C [10°F], whichever is greater
Temperature repeatability	± 1 % of reading
Heating rate control	Coarse adjustment and fine adjustment via set-up software
Programmable heat profiles	Fifteen (15) non-volatile memory
Dedicated input relays	24Vac / 0.3Amp
Head cool relay	ON / OFF for cooling thermode holder
Solder cool relay	ON @ COOL, OFF @ PREHEAT
Programmable relays	4 each, electromechanical (24 Vac or + 24Vdc / 0.3 Amp)
Programmable relay functions	Reflow, preheat, alarm, clean thermode, replace thermode, end reflow, head is up, system ready
Communication ports	RS-232, RS-485

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