InterElectronic

PRODUCT CATALOGUE 2026

BGA Rework Systems

SEAMARK

Hot air BGA rework stations and platforms from Seamark: from compact stations for LED and micro components to fully automatic stations with optical alignment and platforms for super large boards. Precise multi-zone temperature control, HD optical alignment and automatic pick-up and placement for reliable, repeatable rework of BGA, QFN, CSP and LGA packages.



ZM-R720A



ZM-R7220A



ZM-R730A



ZM-R9100



ZM-R8650C



ZM-R5860

OVERVIEW

The Seamark range

Hot air BGA rework stations and platforms from Seamark: from compact stations for LED and micro components to fully automatic stations with optical alignment and platforms for super large boards. Precise multi-zone temperature control, HD optical alignment and automatic pick-up and placement for reliable, repeatable rework of BGA, QFN, CSP and LGA packages.

	**ZM-R720A** Hot Air Rework Station for LED and Micro Components	Chips from 0.6 × 0.6 mm · Optical Alignment ±0.01 mm · ±1 °C Closed-Loop Control · Automatic Feeding
	**ZM-R7220A** Hot Air BGA Rework Station with Optical Alignment	Hot Air Top and Bottom Heating, IR Preheating · Optical Alignment ±0.02 mm · Real-Time Temperature Curve · Joystick Control
	**ZM-R730A** Hot Air BGA Rework Station for Large Boards	PCB up to 632 × 520 mm · Optical Alignment ±0.01 mm · ±1 °C Closed-Loop Control · Automatic Feeding
	**ZM-R9100** Hot Air Rework Platform for Super Large Boards	PCB up to 700 × 635 mm · Chips 1–120 mm · Non-Contact Desoldering · 5 MP + 12 MP Vision · One-Click Rework
	**ZM-R8650C** Fully Automatic Hot Air BGA Rework Station	Fully Automatic Desoldering and Mounting · PCB up to 660 × 600 mm · ±0.025 mm Alignment · 8 Temperature Inputs · MES Ready
	**ZM-R5860** Hot Air BGA Rework Station	Three Independent Heating Zones · 100 Stored Profiles · Laser Red-Dot Positioning · Compact Bench-Top Design

Configuration, demo and quotation

InterElectronic is the Seamark partner for Hungary and Central Europe: application advice, sample tests, installation, training and service.

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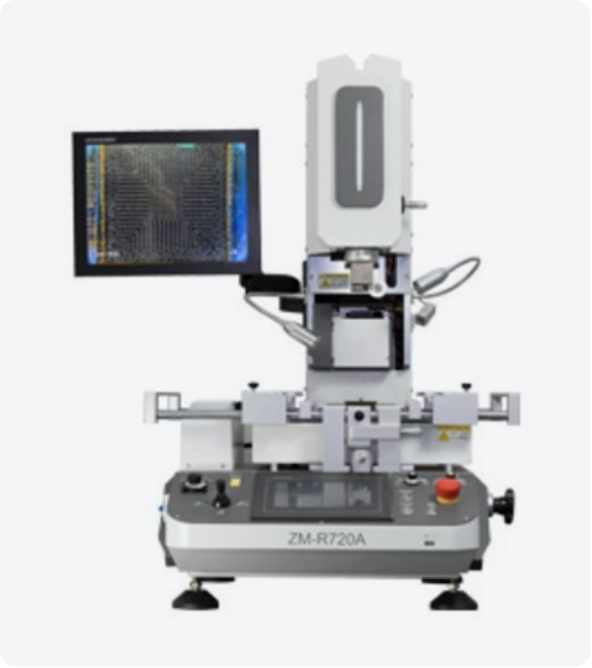
Web www.interelectronic.com

BGA REWORK SYSTEMS

SEAMARK ZM-R720A

Hot Air Rework Station for LED and Micro Components

Chips from 0.6 × 0.6 mm | Optical Alignment ±0.01 mm | ±1 °C Closed-Loop Control | Automatic Feeding



OVERVIEW

The **Seamark ZM-R720A** is a semi-automatic hot air rework station for precision micro devices: mini and micro BGAs, LED chips and other tiny SMD components from 0.6 × 0.6 mm up to 60 × 60 mm, on PCBs up to 412 × 370 mm.

A 2-megapixel HD imaging system with automatic optical zoom and laser red-dot alignment places components with ±0.01 mm accuracy. The carbon fibre infrared preheating zone, the top and bottom heaters and the automatic feeding device make the rework of small parts repeatable and safe for the board.

KEY FEATURES

Carbon fibre infrared heating
IR preheating zone with carbon fibre infrared tubes behind a high-temperature microcrystalline panel, with a multi-function movable PCB bracket

Precision tiny devices
built for the rework of micro components, with automatic feeding; LED feeder fixture available as an option

High-definition alignment
2 MP CCD digital imaging, automatic optical zoom and automatically controlled laser red-dot alignment, ±0.01 mm

15" HD industrial display
1080p image of the component and the pads during alignment

Closed-loop temperature control
K-type thermocouple control with ±1 °C accuracy

Automatic vacuum pick-up
and V-groove board positioning with universal fixture

TECHNICAL SPECIFICATIONS

Power Supply	AC 220 V ±10%, 50/60 Hz
Power	6.15 kW max. (top heater 1.45 kW, bottom heater 1.2 kW, IR preheater 3.2 kW, other 0.3 kW)
PCB Size	Max. 412 × 370 mm, min. 6 × 6 mm
BGA Chip Size	Max. 60 × 60 mm, min. 0.6 × 0.6 mm
IR Heater Size	380 × 280 mm
Temperature Sensors	1 pc
Operation	7" HD touchscreen
Control System	Autonomous heating control system V2
Display System	15" HD industrial display (1080p, 16:9)
Alignment System	2-megapixel HD digital imaging, automatic optical zoom, laser red-dot indicator
Vacuum Adsorption	Automatic
Alignment Accuracy	±0.01 mm
Temperature Control	K-type thermocouple, closed loop, accuracy ±1 °C
Feeding Device	Yes
Positioning	V-groove with universal fixture
Dimensions (L×W×H)	810 × 635 × 870 mm
Weight	84.5 kg

Specifications according to Seamark. Subject to change without notice.

BGA REWORK SYSTEMS

SEAMARK ZM-R7220A

Hot Air BGA Rework Station with Optical Alignment

Hot Air Top and Bottom Heating, IR Preheating | Optical Alignment ±0.02 mm | Real-Time Temperature Curve | Joystick Control



OVERVIEW

The **Seamark ZM-R7220A** is a semi-automatic hot air BGA rework station for removing and soldering BGA, QFN and other SMD packages on PCBs up to 412 × 370 mm. A medium-wave ceramic infrared preheater heats the board from below, while the top and bottom hot-air heaters follow the programmed profile under closed-loop thermocouple control.

The optical alignment system with 2-megapixel digital imaging, automatic optical zoom and laser red-dot indicator places chips from 2 × 2 mm up to 60 × 60 mm with ±0.02 mm accuracy, so rework results are repeatable from operator to operator.

KEY FEATURES

Real-time temperature monitoring
live temperature display with automatic curve analysis

Optical alignment system
HD CCD digital imaging (2 MP), automatic optical zoom, manual control and laser red-dot alignment

Rapid heating and cooling
medium-wave ceramic IR preheating plate, movable multi-function PCB bracket, BGA bottom support frame and integrated laminar cooling fan

Joystick control
smooth head lifting and image zoom for fast, intuitive operation

Automatic vacuum pick-up
and V-groove board positioning with universal fixture

7" HD touchscreen
operation with a 15" industrial display

TECHNICAL SPECIFICATIONS

Power Supply	AC 220 V ±10%, 50/60 Hz
Power	5.65 kW max. (top heater 1.45 kW, bottom heater 1.2 kW, IR preheater 2.7 kW, other 0.3 kW)
PCB Size	Max. 412 × 370 mm, min. 6 × 6 mm
BGA Chip Size	Max. 60 × 60 mm, min. 2 × 2 mm
IR Heater Size	285 × 375 mm
Temperature Sensors	1 pc
Operation	7" HD touchscreen
Control System	Autonomous heating control system V2
Display System	15" industrial display (720p)
Alignment System	2-megapixel digital imaging, automatic optical zoom, laser red-dot indicator
Vacuum Adsorption	Automatic
Alignment Accuracy	±0.02 mm
Temperature Control	K-type thermocouple, closed loop, accuracy ±3 °C
Feeding Device	No
Positioning	V-groove with universal fixture
Dimensions (L×W×H)	685 × 633 × 850 mm
Weight	76 kg

Specifications according to Seamark. Subject to change without notice.

BGA REWORK SYSTEMS

SEAMARK ZM-R730A

Hot Air BGA Rework Station for Large Boards

PCB up to 632 × 520 mm | Optical Alignment ±0.01 mm | ±1 °C Closed-Loop Control | Automatic Feeding



OVERVIEW

The **Seamark ZM-R730A** is a semi-automatic hot air BGA rework station for large and irregular boards up to 632 × 520 mm and chips from 3 × 3 mm to 80 × 80 mm. Three independently controlled heating zones and a 570 × 435 mm infrared preheating zone heat even large industrial control boards evenly.

A 2-megapixel HD imaging system with automatic optical zoom aligns components with ±0.01 mm accuracy, and the automatic feeding device with vacuum pick-up completes PCB transfer and positioning in a single setup. The result is a controlled selective reflow process with soldering quality close to the original SMT assembly.

KEY FEATURES

Stable temperature control
three independently controlled hot-air zones, height-adjustable bottom zone, built-in vacuum nozzle in the top zone with negative pressure monitoring and protection

Large HD touch screen
several operating modes, real-time display and editing of the temperature curve, 8 segments per curve, 100 stored curves, automatic curve analysis

Removable infrared zone
carbon fibre IR tubes behind a high-temperature microcrystalline panel; the zone moves left and right for large and irregular PCBAs

HD optical alignment
2 MP digital imaging, automatic optical zoom and laser red-dot indicator, alignment accuracy ±0.01 mm

Intelligent control
Panasonic PLC, high-precision temperature module and K-type thermocouples with dynamic PID multi-loop closed-loop control, ±1 °C

Safety and process protection
over-temperature alarm, software encryption and foolproof operation

TECHNICAL SPECIFICATIONS

Power Supply	AC 380 V ±10%, 50/60 Hz
Power	7.75 kW max. (top heater 1.45 kW, bottom heater 1.2 kW, IR preheater 4.8 kW, other 0.3 kW)
PCB Size	Max. 632 × 520 mm, min. 6 × 6 mm
BGA Chip Size	Max. 80 × 80 mm, min. 3 × 3 mm
IR Heater Size	570 × 435 mm
Temperature Sensors	5 pcs
Operation	10" HD touch panel (1080p, 16:9)
Control System	Panasonic PLC + temperature control module
Display System	15" HD industrial display (1080p, 16:9)
Alignment System	2-megapixel HD digital imaging, automatic optical zoom, laser red-dot indicator
Vacuum Adsorption	Automatic
Alignment Accuracy	±0.01 mm
Temperature Control	K-type thermocouple, closed loop, accuracy ±1 °C
Feeding Device	Yes
Positioning	V-groove with universal fixture
Dimensions (L×W×H)	1000 × 835 × 960 mm
Weight	130.5 kg

Specifications according to Seamark. Subject to change without notice.

BGA REWORK SYSTEMS

SEAMARK ZM-R9100

Hot Air Rework Platform for Super Large Boards

PCB up to 700 × 635 mm | Chips 1–120 mm | Non-Contact Desoldering | 5 MP + 12 MP Vision | One-Click Rework



OVERVIEW

The **Seamark ZM-R9100** is a fully automatic hot air rework platform for 5G and other large server mainboards up to 700 × 635 mm, handling components from 1 × 1 mm chips to 120 × 120 mm BGAs. It combines desoldering, solder removal, solder dipping, placement and soldering in one automated process.

After the first alignment, identical reworks on the same position run with one click, which reduces the dependence on highly skilled operators. Four independent closed-loop heating zones keep the large boards flat and evenly heated.

KEY FEATURES

Non-contact single-point desoldering

precision load cells and barometric height measurement keep the nozzle off the pad, reducing BGA scrap and pad damage; desoldering paths for panelised boards can be generated without Gerber files

High-resolution CCD vision

5 MP top and 12 MP bottom camera with in-house software, 0.015 mm/pixel and ±0.025 mm alignment accuracy; align once, then one-click rework

Four independent heating platforms

top soldering/desoldering, top solder removal, bottom heating and a movable zone, each with its own closed-loop temperature control

Flexible nozzles

replaceable desoldering nozzles from Ø0.2 to 3 mm for consumer, telecom and industrial boards

Industrial PC + servo control

stable, precise execution of complex motion paths and process logic

Safety protection

dual-stage light curtains, independent secondary protection for every heater, load cells on all pressing modules, door and window limit switches, alarms for over-temperature, operator entry and overtravel

TECHNICAL SPECIFICATIONS

Power	22.8 kW total (upper zone 2 kW, lower zone 2 kW, preheating zone 16 kW, desoldering head 1 kW)
PCB Size	Max. 700 × 635 mm, min. 10 × 10 mm
Chip Size	Max. 120 × 120 mm, min. 1 × 1 mm
IR Zone Size	695 × 590 mm
Positioning	L-shaped card slot and universal fixture (custom fixtures available)
Control System	Industrial PC + servo motion control
Alignment Accuracy	±0.025 mm
Desoldering Head Temperature	Max. 600 °C, adjustable
Residual Solder Height	≤15%
Residual Solder Quantity	≤10%
Desoldering Nozzle	Replaceable, Ø0.2–3 mm
Nozzle Height Control	Real-time adjustment by vacuum feedback
BGA Substrate Flatness	≤0.15 mm
Solder Ball Size	0.2–0.76 mm
Solder Recovery	Replaceable filter cartridge
Alignment System	Top camera 5 MP, bottom camera 12 MP; 0.015 mm/pixel; field of view top 39 × 29 mm, bottom 59 × 44 mm
Changeover Time (after set-up)	20 min
Temperature Measurement Inputs	7
Dimensions (L×W×H)	1450 × 1600 × 1757 mm
Weight	1205 kg

Specifications according to Seamark. Subject to change without notice.

BGA REWORK SYSTEMS

SEAMARK ZM-R8650C

Fully Automatic Hot Air BGA Rework Station

Fully Automatic Desoldering and Mounting | PCB up to 660 × 600 mm | ±0.025 mm Alignment | 8 Temperature Inputs | MES Ready



OVERVIEW

The **Seamark ZM-R8650C** is a fully automatic hot air BGA rework station with optical alignment for large boards such as 5G base station, server and industrial control boards up to 660 × 600 mm. It handles components from 1 × 1 mm chips to 100 × 100 mm modules, from recognition and alignment to placement, soldering and desoldering.

A servo motion system and 2-megapixel vision align parts with ±0.025 mm accuracy, so results do not depend on operator skill. Top and bottom convection hot air zones and a 16 kW infrared preheating zone, each with its own K-type thermocouple loop, keep high-thermal-mass boards flat and fully reflowed.

KEY FEATURES

Fully automatic process

automatic optical mounting and desoldering; the operator selects the profile and presses start

Three independently controlled zones

convection hot air top and bottom, large-area bottom heater for big BGAs, medium-wave ceramic infrared preheating plates made in Germany

Precise temperature control

K-type thermocouples, dynamic PID multi-loop closed-loop control and selective reflow profile, ±1 °C; 8 external sensors for profile recording and analysis

Traceability and Industry 4.0

temperature profile analysis per serial number (S/N); optional software link to SAP, ERP and MES

Full ESD protection

ESD-safe design with integrated ionising air blower for sensitive BGA, GPU and FPGA devices

Fast changeover

L-groove and universal fixtures, custom fixtures for irregular boards

TYPICAL APPLICATIONS

5G base station and telecom boards, server blades and motherboards, industrial control boards and other high-thermal-mass PCBs in EMS production, including medical, aerospace and automotive electronics.

TECHNICAL SPECIFICATIONS

Power Supply	AC 380 V ±10%, 50/60 Hz
Power	22 kW total (upper zone 2 kW, lower zone 2 kW, preheating zone 16 kW, other 2 kW)
PCB Size	Max. 660 × 600 mm, min. 10 × 10 mm
BGA Chip Size	Max. 100 × 100 mm, min. 1 × 1 mm
IR Zone Size	645 × 524 mm
Motion Control	X / Y / Z
External Temperature Sensors	8 pcs
Control System	Industrial PC + servo motion control
Display	24" HD monitor
Alignment System	2-megapixel optical vision alignment
Vacuum Adsorption	Fully automatic
Alignment Accuracy	±0.025 mm
Temperature Control	K-type thermocouple, closed loop, independent control per zone, ±1 °C
Feeding Device	Semi-automatic
Positioning	L-groove and universal fixture (custom fixtures for irregular boards)
Dimensions (L×W×H)	1235 × 1557 × 1850 mm
Net Weight	993.5 kg

Specifications according to Seamark. Subject to change without notice.

BGA REWORK SYSTEMS

SEAMARK ZM-R5860

Hot Air BGA Rework Station

Three Independent Heating Zones | 100 Stored Profiles | Laser Red-Dot Positioning | Compact Bench-Top Design



OVERVIEW

The **Seamark ZM-R5860** is a compact hot air BGA rework station for soldering and desoldering BGA packages from 10 × 10 mm to 40 × 40 mm on PCBs up to 410 × 370 mm. Precisely controlled convection hot air melts the solder balls, so the component can be removed or replaced without damaging the board or the part.

Three independently controlled heating zones (top and bottom hot air, infrared preheating), a height-adjustable bottom zone and a powerful integrated cooling fan cover the whole cycle: preheating, alignment, soldering or desoldering and controlled cooling.

KEY FEATURES

Three independent heating zones
convection hot air top and bottom heaters, height-adjustable bottom zone and 2.7 kW infrared preheater

Temperature profiles
HD touchscreen with real-time display and editing; 8 segments per profile, 100 stored profiles, self-tuning function

Closed-loop control
high-precision K-type thermocouple, closed-loop control with ±3 °C accuracy

Laser red-dot positioning
laser indicator for fast PCB and component positioning

Vacuum pick-up pen
external vacuum pen for easy BGA handling

Controlled cooling
high-power integrated cooling fan to prevent thermal stress and warping

TECHNICAL SPECIFICATIONS

Power Supply	AC 220 V ±10%, 50/60 Hz
Power	5.0 kW max. (top heater 0.8 kW, bottom heater 1.2 kW, IR preheater 2.7 kW, other 0.3 kW)
PCB Size	Max. 410 × 370 mm, min. 10 × 10 mm
BGA Chip Size	Max. 40 × 40 mm, min. 10 × 10 mm
IR Heater Size	375 × 285 mm
Temperature Sensor	1 pc
Operation	7" HD touchscreen
Control System	Autonomous heating control system V1
Alignment	Laser red-dot positioning
Vacuum Adsorption	Manual (external vacuum pen)
Temperature Control	K-type thermocouple, closed loop, accuracy ±3 °C
Positioning	V-groove with universal fixture
Dimensions (L×W×H)	635 × 620 × 655 mm
Weight	43.5 kg

Specifications according to Seamark. Subject to change without notice.