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

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|---|---|
| **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 |

### 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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Specifications according to Seamark. Subject to change without notice.