

MICROSTAR EF8622

Fully Automatic High-Precision Eutectic Die Bonder

EF8622 is a fully automatic eutectic die bonder designed for high-precision, multi-chip packaging in optical communications and data center applications. It supports eutectic and dipping processes with $\pm 1.5 \mu m@3\sigma$ accuracy, dual-station parallel operation, and 12-nozzle dynamic tool change. The system integrates an air-floating platform and dual-pulse heating to enhance alignment stability and thermal uniformity, with AGV and multi-carrier compatibility for high-yield, low-intervention production.



Key Features



High Precision

Equipped with an air-floating platform and vision system, combined with table-mapping compensation, achieving $\pm 1.5 \mu m@3\sigma$ placement accuracy and $0.1 \mu m$ repeatability.



High Efficiency

Dual-station operation with 12-nozzle dynamic tool change enables non-stop switching, reaching up to 144



High Flexibility

Supports various die sizes and carriers; modular design and BOS interface allow flexible configurations.



High Adaptability

Compatible with magazine loading, AGV, and buffer switching; supports zero-time auto nozzle/dispenser change for multi-product production.

Applications



Optical Module



LiDAR Sensors



RF Devices



Power Devices



Laser Radar



Microwave Devices & Antennas



Technical Specifications

| | | EF8622 |
|-----------------------------|---------------------|--|
| Placement Accuracy | | ±1.5μm(Standard Die) |
| Bonding Process | | Eutectic Bonding / Dipping Bonding |
| Equipment Efficiency | | 103-144 UPH(Eutectic)/240-300 UPH(Dipping) |
| Angular Accuracy | | ±0.15° |
| Application | | COC/COS/Gold-Box |
| Chip Size | | 0.15x0.2mm-5x5mm |
| Substrate Size | | 16x16mm |
| Carrier Size | | L:160-200mm/W:80-100mm |
| Machine Dimensions | | 2370mmx1210mmx1870mm(L x W x H) |
| Weight | | 2000Kg |
| Bonding System | Nozzles | 12 nozzles, dynamic auto change |
| | Force Control | (10–100 g): ±2 g;(100–500 g): ±3% |
| Loading/Unloading System | Inline Integration | Magazine loading/unloading, AGV interface |
| | Barcode Function | Supports carrier barcode binding |
| Eutectic System | Working tables | 2 |
| | Transfer Stations | Up to 8 single bonding stages |
| | Heating Method | Pulse Heating |
| | Temperature Range | 25-450°C |
| | Heating Rate | 80°C/s (adjustable heating/cooling rate) |
| Feeding Modes | Wafer | 6", standard: 2 units |
| | Waffle Pack/Gel-Pak | 2", standard: 6 units |



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