

AUTOTRONIK

Fertigungssysteme für die **Elektronikindustrie**

AUTOTRONIK-SMT GmbH
Sulzbacher Str. 111
D-92224 Amberg

Tel +49 (0) 9621-600 691
Fax +49 (0) 9621-600 692

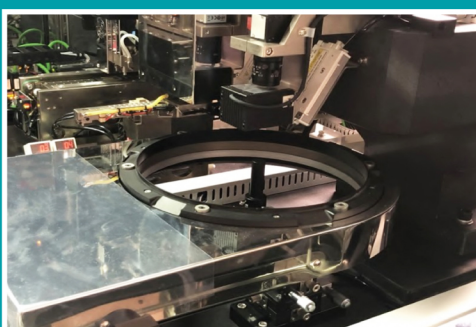
office@autotronik-smt.com
www.autotronik-smt.de

MODEL:

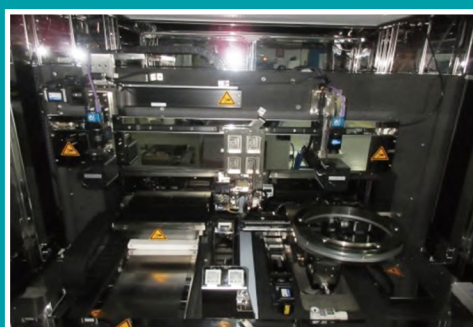
MAS 399 Pro

micro assembly and placement system

- MAS399 Pro adopts high-strength steel frame and customized precision-grade marble structural parts, to ensure the accuracy and stability of the machine.
- Vision system hardware adopts high-resolution digital camera and lens with the pixel size as fine as 5um.
- The visual light source system has multiple sets of light source combinations at the same time, which corresponds to the visual inspection requirements of various wafer chips.
- Visual recognition system:
Operator can select Pattern matching + Edge matching as the recognition condition, to greatly improve the mounting accuracy and product stability.
- System build-in Error Proofing function for vision recognition the unqualified, direction-error and BadMark components.
- The mainly driving axis is adopts a high-resolution linear encoder and linear motors to constructs a fully closed-loop precise controlling system.
- The bond head driver adopts closed-loop pressure controlling system, setting range: 30~500g.
- Production capacity can reach to max. 2000 UPH.
- Optional automatic loading/unloading system to avoided the operation error and labor cost reduced with production efficiency improved.
- Optional Tray Feeder to integrated with Wafer/Tape feeding system to constructs a multi-form pick and place assembly platform, for the placement requirement of Dies, Chips and Solder-plate.
- Machine's outer cover is made of shiny mirror surface stainless steel plate, and the dust-free level inside the equipment can reach Level '10'.
- Component alignment system adopts UP alignment method for auto-offset, which can effectively prevent the nozzle being dirty due to excessive suction while the component position deviation.
- Electrical control system adopts the international mainstream EtherCat scheme, with perfect diagnostic software, which makes the equipment maintenance be easier.
- The Auto-wafer loading system can store up to 25 types of wafer dies, and available to programming the various PnP procedures as required.
- The PC has a 240GB high-speed SSD hard disk, there is unlimited for production file storage.



8" / 12" Wafer Flange Platform



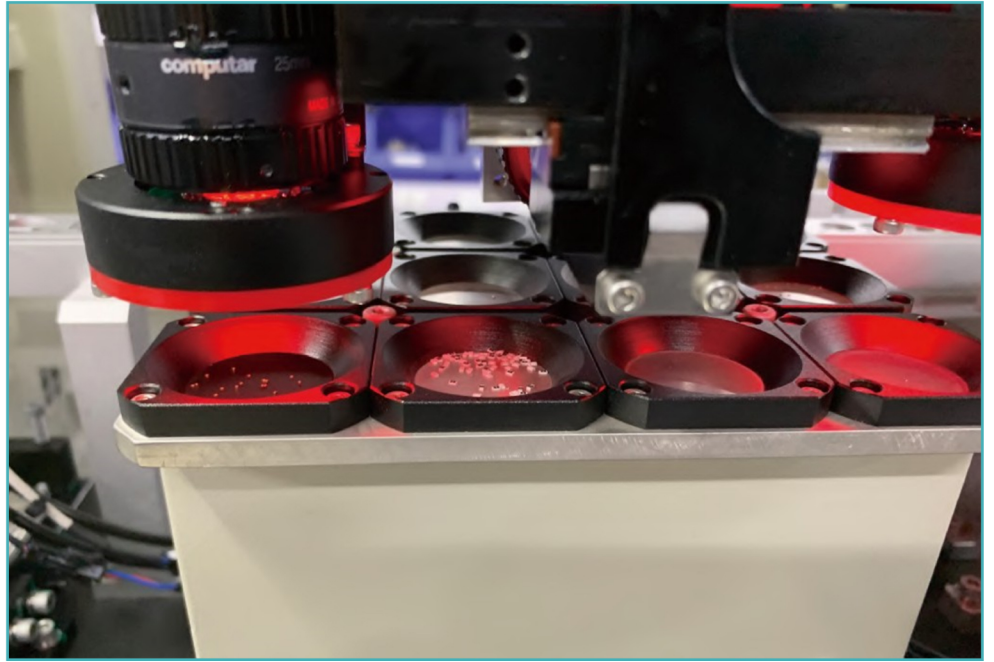
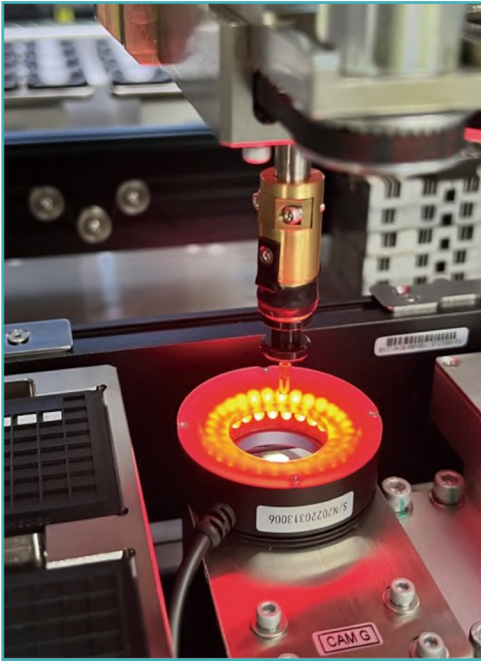
Multi-type of Feeding Platform



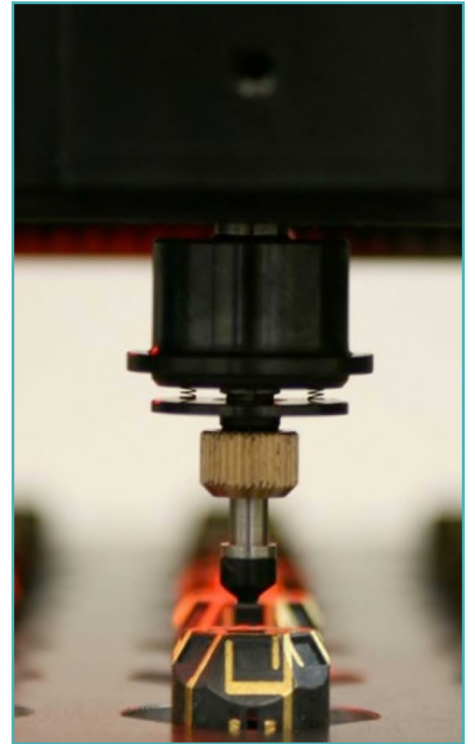
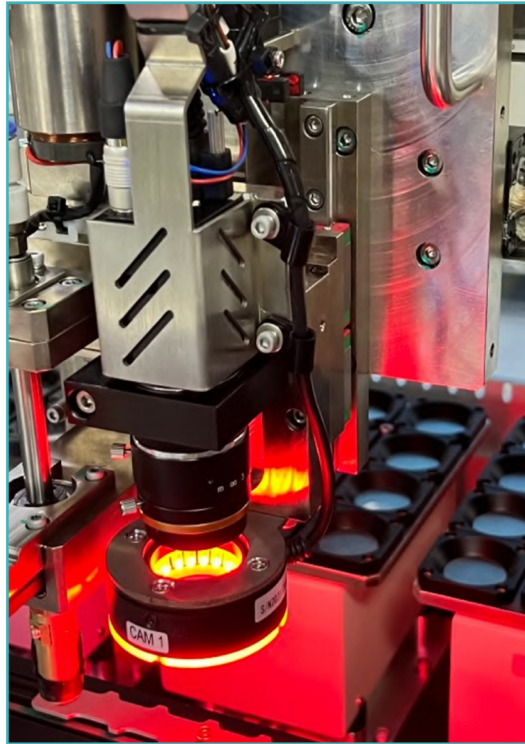
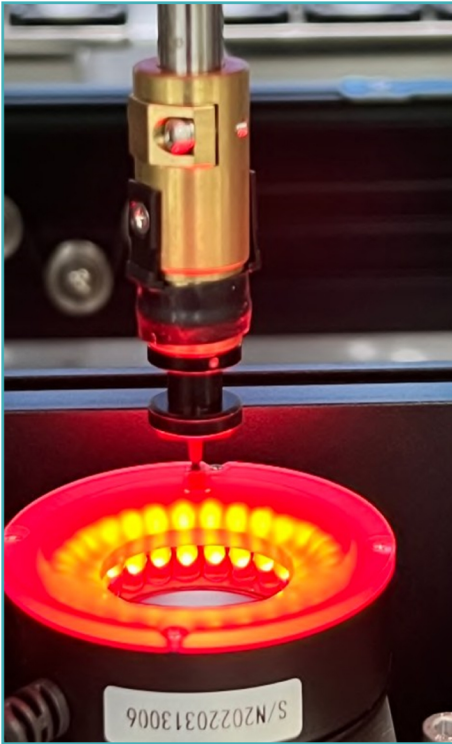
Linear Motor Driver

MAS 399 Pro

Technical Features



Bulk-pack materials can be fully automatic identification and Pick & Place with the aid of automatic bulk material feeding platform (with vibration driver) and the advanced image recognition systems.



MAS399 Pro is equipped with multiple sets of HD cameras, which are used for the high-definition recognition of the die & chips, the FOV range is 0.15*0.15 to 8*8 mm.



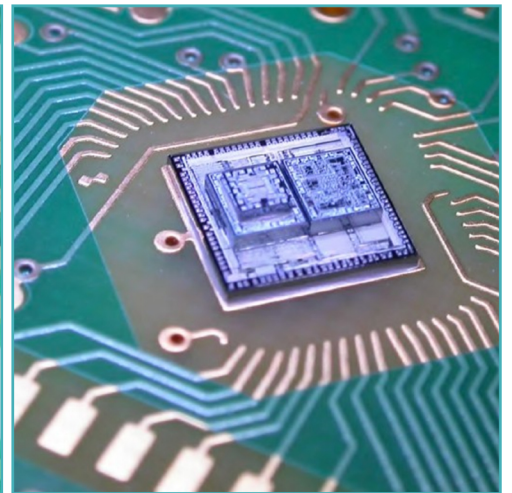
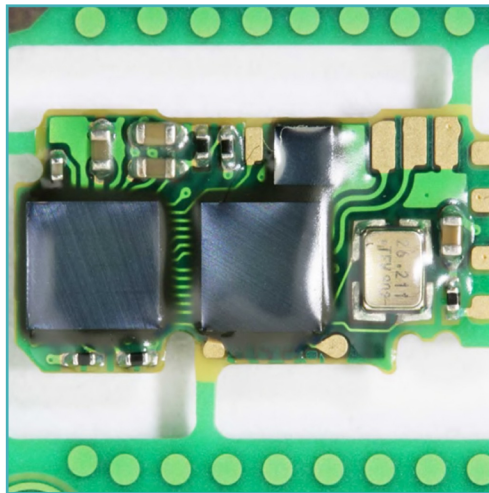
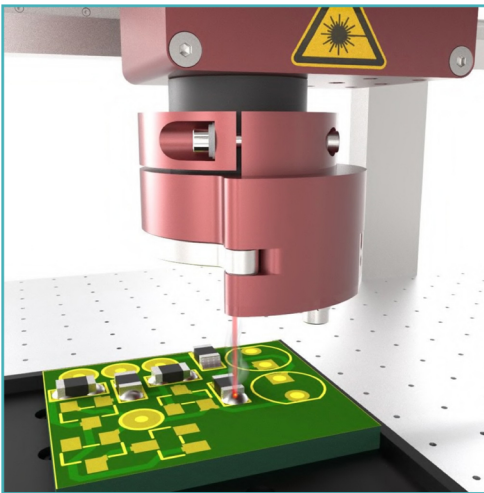
MAS 399 Pro

Technical Features



Tray feeding platform:

Allowed 16 pcs. of 2" Gel-Pak / JEDEC material tray place on each group of tray feeding, and max. three groups are available install in a machine.



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|--|--|
| Laser height measurement device | : Correspond to different components height on carrier |
| Effective area of placement platform | : 600mm x 500mm (resolution : 0.01 μ m) |
| Effective area of wafer feeding platform | : 220mm x 220mm (resolution : 0.01 μ m) |
| Bonding force (standard range) | : 30g-500g (optional up to 2000g) |
| Production capacity | : 2000 dies/h (for standard application & material) |
| Placement accuracy | : $\pm 10\sim 20\mu$ m @ 3 sigma* (process depending) |

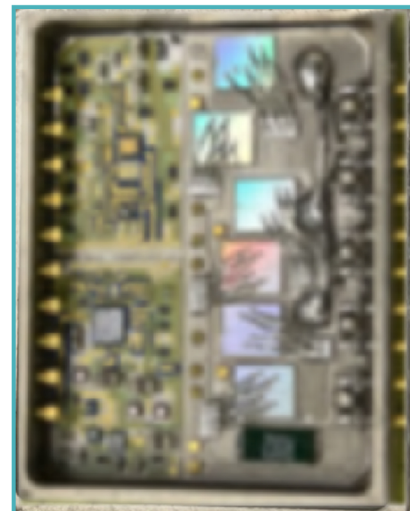
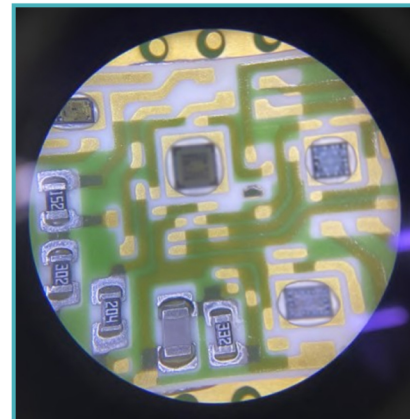




MAS399 Pro

Technical Parameters

ITEMS	SPECIFICATIONS
XY Placement Accuracy	± 10 ~ 20µm (process depending)
XY Resolution	0.001mm
R-axis Resolution	0.02°
Feeding Forms	Tape Feeder (std.) + Tray (option) + Wafer (option) system
Tape Feeder Platform	For 8mm Tape Feeder x 32 slots (48 slots larger platform is option), (compatible with Solder-plate tape feeder)
Wafer Platform (Option)	For 8" (inch) Wafer Die Flange, the 4"/5"/6" flange platform is option
Tray Platform (Option)	Max. 16pcs. of 2" Gel-Pak @ each tray platform, max. 3 platforms installed (but no space for Wafer platform if TWO or THREE tray platforms has installed)
Productivity	1500/2000uph (1 or 2 Bonding Heads)
Pressure Control of Bond head	Torque control method, range 30~500g (accuracy ±10g)
Glue Dispensing (Optional)	Pressure valve + syringe , or Piezoelectric Jet System
Conveyor Through	Left --> Right
Conveyor System	Multiple segment with independent driver
Board / Carrier size	max. 600*300mm (with Tray Platform installed); max. 600*200mm (with 8" Wafer Platform installed)
Transmission control	Hi-precise linear motor + non-touch linear encoder + linear rail
Component (DIE) size	0.2 x 0.2 ~5 x 5mm (special camera with bigger FOV is option)
Types of placement object	Chips/DBC/Wafer/Solder-plate/odd-form shell and odd-form components (may optional nozzle and platform)
Positioning Camera	High resolution Digital Camera
Object Positioning Method	Pattern matching / Pattern + Edge matching (with BadMark identification)
Operation System	Windows 10 ® (English / Chinese)
Power Supply Requirement	220VAC ±10% , 50~60Hz, 3.5kW
Dimension (L*W*H)	1783*1384*1620mm
Weight	Approx. 1300kg



OUR SERVICE!

We will serve you not just a planning, consulting, installation and training
We will also provide perfect and completely after-sales service.

This is our mission and honor!

AUTOTRONIK-SMT GmbH

