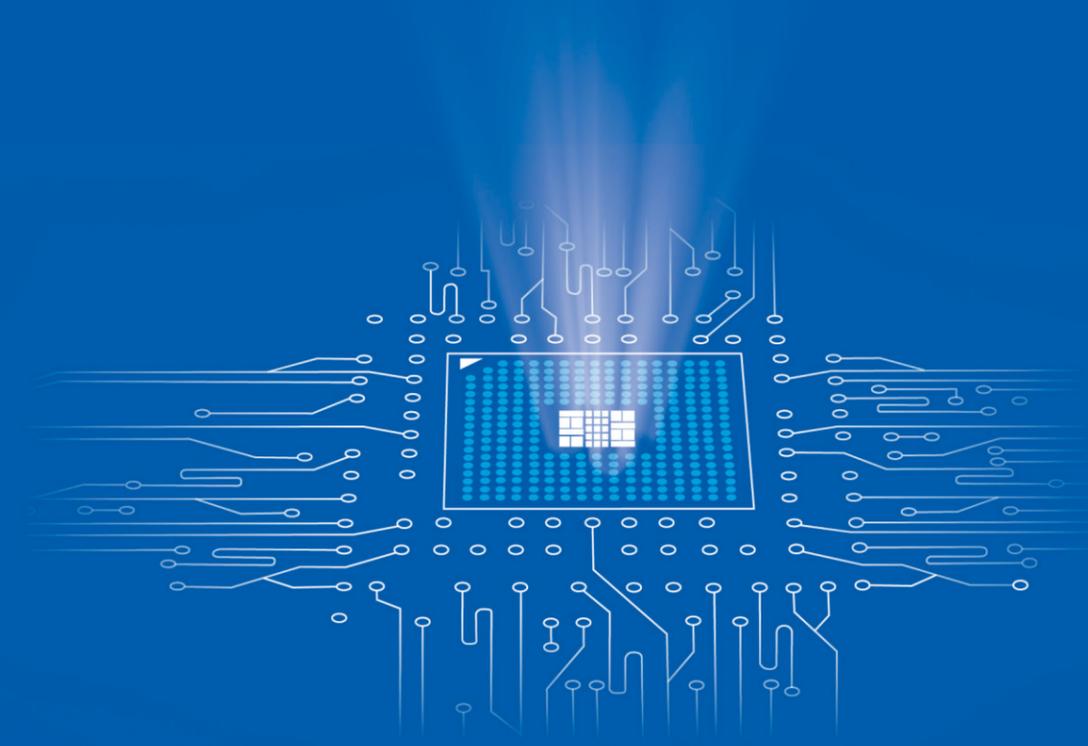


Precision and Passion with Everything



## Precision and Passion with Everything



**DONG GUAN PRECISION  
INTELLIGENT TECHNOLOGY CO.,LTD.**

Headquarters: No. 363 Dongxingxi Road, Dongkeng Town, Dongguan City.

Branch factory: No.151 Jiaoxing Road, Dongkeng Town, Dongguan City.

TEL: 0769-26622766

WEBSITE: [www.precisionext.com](http://www.precisionext.com)



Official WeChat Account



Official Website

PRECISION INTELLIGENT TECHNOLOGY CO.,LTD.

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# Company Introduction

## Company Profile

Precision Intelligent Technology Co., Ltd (PrecisioNext) was established in November 2017. The founding team of the company are all experienced professionals in the fields of motion control, servo drives, linear motors, machine vision, semiconductor equipment and automation equipment. The company aims to become a world-leading platform-based enterprise in the field of high-end equipment.

The headquarters and production center of PrecisioNext are located in Dongguan, with its R&D and sales centers distributed in Suzhou, Shenzhen and Hong Kong. The company mainly focuses on the R&D and sales of semiconductor equipment, high-precision winding equipment, controllers, and drivers. The company owns a production plant of more than 10,000 m<sup>2</sup> in Dongguan, which adopts a vertically integrated model of machining, assembly and testing to ensure the quality and delivery of the company's products. Currently, the company has more than 200 employees, led by a team of elites with Ph.D and Master's degrees from prestigious universities such as Beihang University, and Huazhong University of Science and Technology. Since its establishment, the company has been recognized by and developed strategic cooperative partnership with numerous listed companies both at home and abroad.

## Brand Concept

**Vision:** Becoming a world-leading high-end provider of intelligent equipment and key components.

**Mission:** Promote the progress of industrial production and improve the relationship between human and nature with advanced intelligent technology.

**Values:** Serve the country through industrial development, wolf spirit culture, innovation-oriented, dedication to work, and committed to excellence.

**Brand slogan:** Precision and Passion with Everything.

## Management Team

### Our Investors



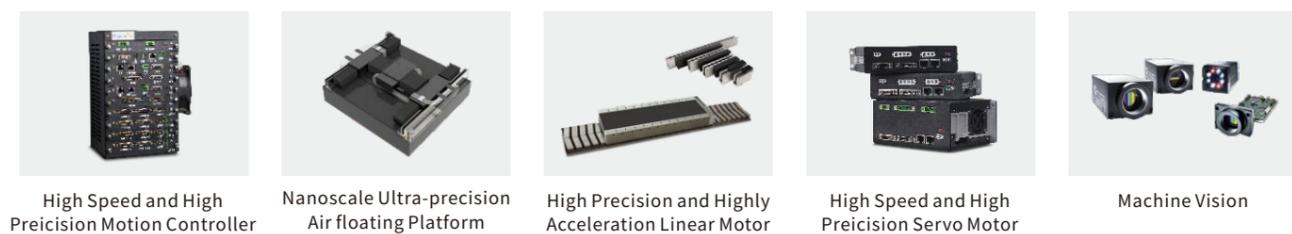
## Solution



## Product Series



## Underlying Technologies and Products



## Some of Our Partners



# Technical Achievements



## Core Technology

The company has more than 200 employees, including more than 80 R&D personnel, that are distributed in departments of mechanical design, electrical design, control system development, and equipment software development. 80% of the R&D personnel have bachelor or above level degrees, and the personnel owning a doctoral degree accounts for 15%. Many have a background of studying abroad. Currently the company has established 2 factories with a total area of more than 10,000 square meters, with an annual production capacity of 2,000 smart devices.

### High-speed & High-precision Motion Control Technology

A motion control system with an open structure that can be quickly reorganized in accordance with specific application requirements. Applying an open network-based structure, complex motion planning, high-speed real-time multi-axis interpolation, error compensation and kinematics and dynamics calculations to achieve high-precision, high-speed and smooth motion control.

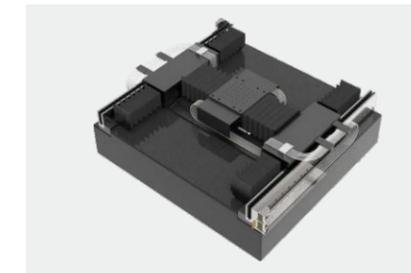
### Nanoscale Ultra-precision Air Bearing Platform

Multi-axis nanoscale ultra-precision air bearing platform, capable of positioning control within 25nm for precision measurement, bonding, and lithography equipment.

### High precision & Highly Accelerated Linear Motor

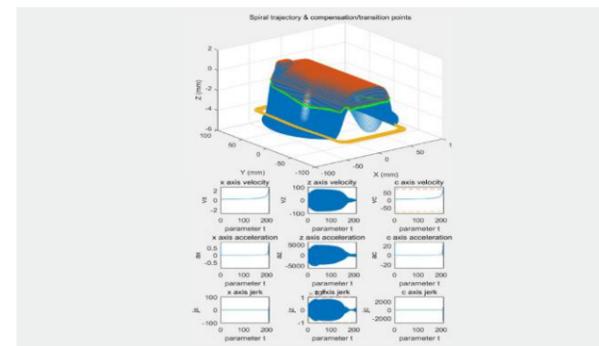
Private servo controller and linear motor for linear drive; Self-adaptive control technology, high frequency response and vibration abatement technology.

<b>20KHz</b> Response Frequency	<b>30g</b> Accelerated Speed
<b>120m/min</b> Speed	<b>0.001mm</b> Positioning Accuracy



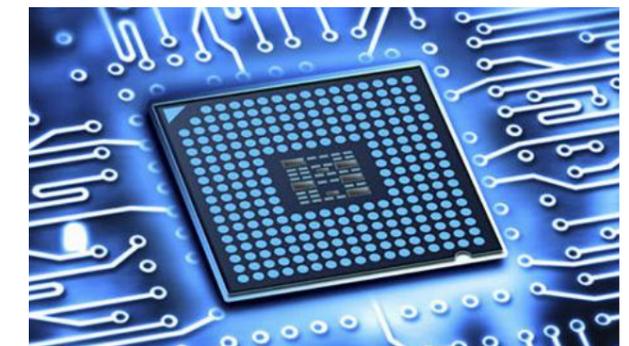
### Comprehensive Modeling and Algorithm Capabilities

Multi-axis simultaneous high-precision algorithm of semiconductor equipment;  
High-precision machining algorithms for complex curved surfaces;  
Winding and welding algorithm;  
Robot motion planning algorithm.



### Semiconductor Process Technology

The core team has an average of more than 10 years of experience in semiconductor equipment;  
Deep command of the process methods of traditional packaging and advanced packaging;  
Have a deep understanding of IC and storage, photonics packaging, and mobile phone camera assembly;  
Rich experience in the application of motion and vision technology in the semiconductor industry.



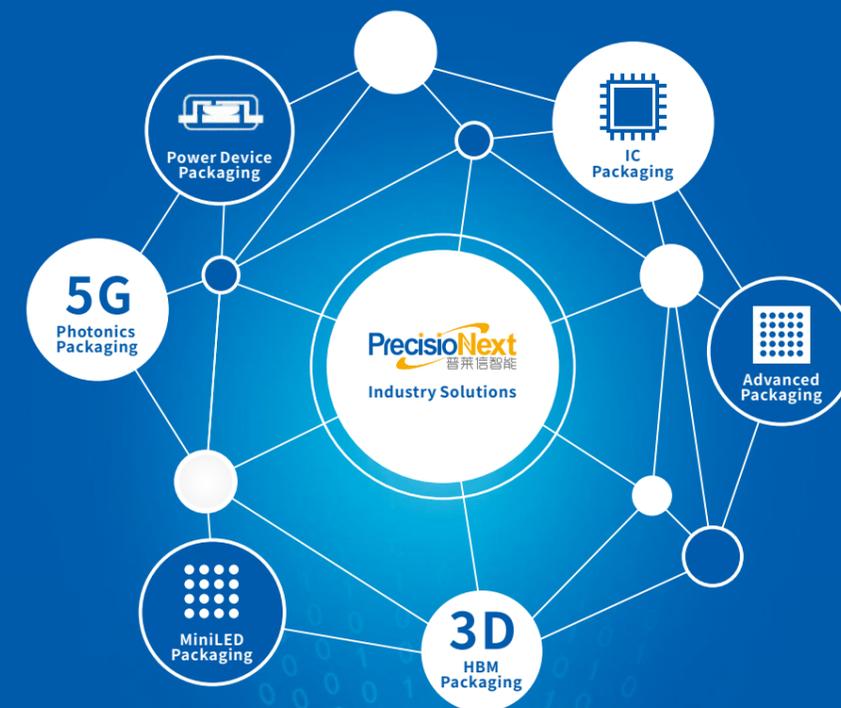
# Qualification Honor

## Social Prestige

- National High-Tech Enterprise.
- Special prize of “Winning in Dongguan” Science and Technology Innovation and Entrepreneurship Annual General Competition.
- Top 10 Chinese Makers in 2020.
- 2020 Venture50 hard technology in the investment industry.
- 2020 Venture50 list of new enterprises.
- 36Kr TOP50 enterprise with the most potential to land on SEE STAR MARKET in China in 2020.
- 2020 GG LED Globe Award.
- Vice president unit of Shenzhen Semiconductor Industry Association.
- First prize of “Winning in Dongguan” Science and Technology Innovation and Entrepreneurship Annual General Competition.
- 2021 industry innovation top 100 list.
- PIONEER-10 of 2021 PIONEERS TO THE STAR.
- 36Kr “WISE 2021” hard technology enterprise of the year.
- ELEXCON SiP pioneer award 2021.
- Technological innovation and growth enterprise.



# Semiconductor Equipment Series



# Thermal Compression Bonder

## Loong

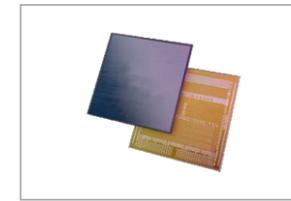
### Advantages

- Wafer size: 6"- 12";
- X/Y placement accuracy:  $\pm 1\mu\text{m}$  @ $3\sigma$ ;
- Theta placement accuracy:  $\pm 0.01^\circ$  @ $3\sigma$  (33mm>die>=10mm),  $\pm 0.05^\circ$  @ $3\sigma$  (10mm>die>2mm);
- Specialized in handling multi-layer Die, heterogeneous integration of 2D, 2.5D, and 3D;
- Real time Active Tip Tilt control system, which can accurately adjust the coplanarity of the pulse heater;
- Accurate bond force control, capable of providing a maximum bond force of 300N and a pressure control accuracy of 0.05N;
- Inert environment, realizing unique LPC process technology.

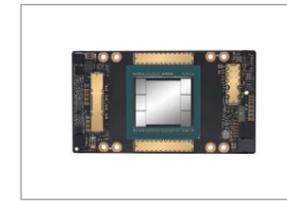


CoWoS  
HBM  
CPO

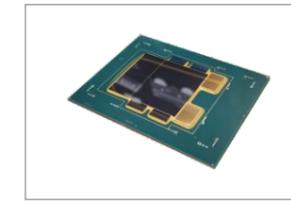
### Applications



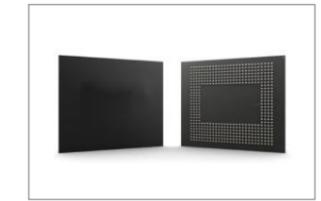
HBM



CoWoS

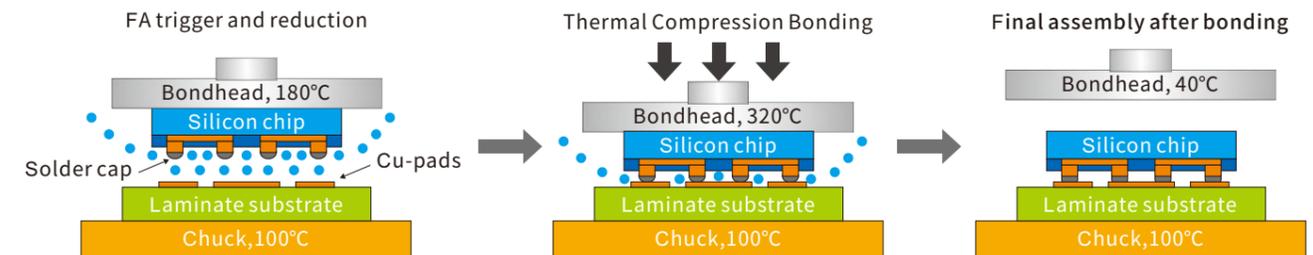


EMIB



DRAM

### Fluxless TCB Process



### 规格参数

	Item	Loong WS-C2W	Loong WS-C2S
System Capability	UPH	>400	>100
	XY placement accuracy	$\pm 1\mu\text{m}$ @ $3\sigma$	$\pm 2\mu\text{m}$ @ $3\sigma$
	Die rotation	$\leq 0.01^\circ$ @ $3\sigma$ (33mm>die>10mm) $\leq 0.05^\circ$ @ $3\sigma$ (10mm>die>2mm)	$\leq 0.01^\circ$ @ $3\sigma$ (70mm>die>10mm) $\leq 0.05^\circ$ @ $3\sigma$ (10mm>die>2mm)
	BH/Stage coplanarity	$1\mu\text{m}$ @10x10mm area	$1\mu\text{m}$ @10x10mm area
Bondhead System	Bond force	Max.200N	Max 300N
	Max bondhead temp	400°C	400°C
	BH heating rate	Up to 150°C/s	Up to 100°C/s
	BH cooling rate	Up to 50°C/s	Up to 50°C/s
Pre-heat Station	Max chucktable temp	200°C	200°C
Materials Handling Capability	Die size	2x2mm~33x33mm	2x2mm~70x70mm
	Die thickness	0.03~1mm	0.1~2mm
	Wafer/Substrate size	12inch wafer	10×10mm~120×120mm leadframe or strip
	Wafer/Substrate THK	0.3mm~2mm	0.17mm~3mm
	Warpage handle chip	Max. $\pm 3\text{mm}$	Max. $\pm 1\text{mm}$
	Chip supplier	12"wafer	12" wafer
	Multi die and Wafer sorting	Support more than 3 types of wafer sorting and multi-die process	Support more than 3 types of wafer sorting and multi-die process
Atmosphere Protection	Atmosphere protection	N2 (O2 PPM<100ppm)	N2 (O2 PPM<100ppm)
Pre-treatment	Pre-treatment	Dipping flux (Ordinary temperature dipping) Dipping force: <20N Fluxless	Dipping flux Dipping force < 50N

# Mass Transfer PLP Thorn Die Attach

## XBonder Pro

### Advantages

- Xbonder is capable of transferring 360,000 LED chips in one hour.
- The accuracy can be from 5 to 15 μm with high UPH.
- Which can process chips 10 to 3000μm.
- Applicable for mass transfer of backlight display or RGB display.
- Support FOPLP in the field of IC with higher UPH than Pick&Place machine.
- Small footprint and low energy consumption.
- Support for large substrates 950x500mm.
- No need lamination process.

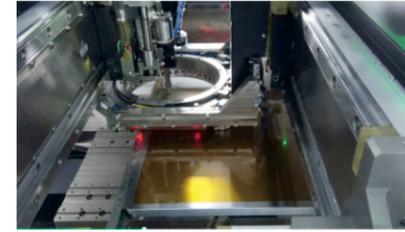
**360k**  
UPH

**±5-15μm**  
Accuracy

FOPLP  
Mini  
Micro

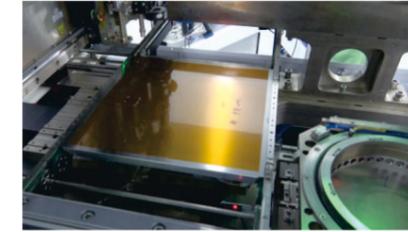


### Features



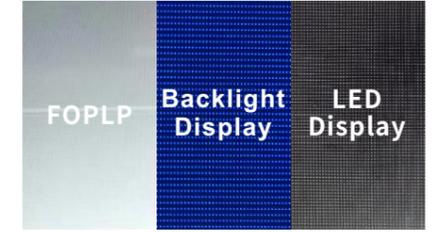
#### Advanced Flip Chip Die Attach Process

- Exclusively using the flip chip die attach process of the chip eject mode with proprietary intellectual property rights, which is completely different from the traditional Pick&Place die attach process.



#### Super-high Velocity and High Precision

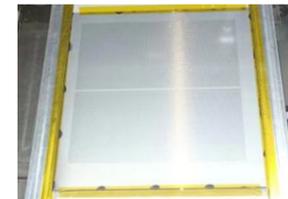
- Capable of producing chips with a minimal size of 10μm, with transferring 360,000 LED chips in one hour and the precision that can reach up to ±5-15μm.



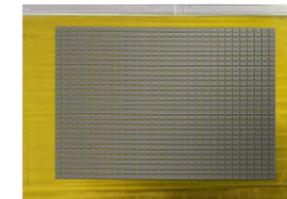
#### Applicable for FOPLP, Backlight Display and LED Display.

- Applicable for processing chips 10 to 3000μm, mass transfer of FOPLP, backlight display and LED display.

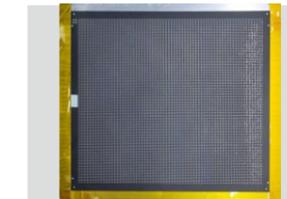
### Applications



FOPLP



FOPLP



MiniLED Display



MiniLED Backlight Display

### Specifications

	Item	XBonder Pro	XBonder Pro Mid	XBonder Pro Max
System Performance	UPH	360K(Max)		
	XY placement accuracy	±5-15μm @ 3σ		
	Theta placement accuracy	±1.5°@ 3σ		
Materials Handling Capability	PCB	Length: 550mm(Max); Width: 300mm(Max)	Length: 550mm(Max); Width: 405mm(Max)	Length: 950mm(Max); Width: 500mm(Max)
	Die size	10μm(Min)~3000μm(Max)		
	Wafer size	8" Wafer(Max)		
Bond Head System	Bond force	100 gf (Min)		
Pattern Recognition System	PR system	256 Grey levels		
	Resolution	2448pixel x 2048 pixel (Customizable)		
	Angular accuracy	±0.1°		
Dimensions & Weight	Dimension	1670 x 1100 x 1650 mm (Length x Width x Height)	1700 x 1250 x 1650 mm (Length x Width x Height)	2200 x 1400 x 1650 mm (Length x Width x Height)
	Weight	1200kg	1650kg	1900kg

# IC High Precision Die Attach



## DA1201

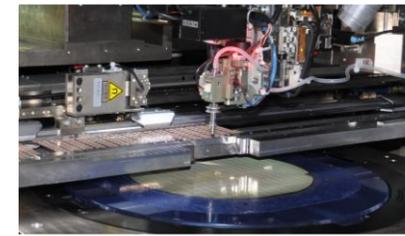
### Advantages

- Wafer size: 6"- 12";
- Dual dispensing system;
- High-precision linear driven bond head;
- Support DAF function;
- Multifunction work table, suitable for different kinds of lead frames & substrates;
- High-precision wafer table with highly accurate die rotation system and motorized wafer expansion system;
- Intelligent dispensing control system to realize precision glue volume control;
- Missing die detection and re-picking function;
- Programmable Pick/Bond Force;
- Customization for special design is also available.

### Specifications

	Item	DA1201
System Performance	Cycle time	250ms
	X/Y placement accuracy	$\pm 10\text{-}25\mu\text{m} @ 3\sigma$
	Theta placement accuracy	$\pm 1^\circ @ 3\sigma$
Materials Handling Capability	Die size	0.15x0.15mm-25x25mm
	Die thickness	0.076 – 1 mm (30-40 mils, Standard)    Thinnest: 0.05 mm (2 mils, Optional)
	Substrate dimensions	Length: 100-300mm ; Width: 40-100mm; Thickness: 0.1-0.8mm (Standard) 0.8-2.0mm (Optional)
Wafer System	Magazine dimensions	110-310mm x 20-110mm x 70-153mm (Length x Width x Height)
	Wafer size	6"-12"
	Auto-theta alignment	$\pm 10^\circ$ Range
Bond Head System	Bond force	20 - 500 g (Programmable)
	Workholder System	Trackwidth
Pattern Recognition System	PR system	Multi-color
	Resolution	1920pixel x 2560 pixel (Customizable)
	Pixel & FOV	5M (1920x2560 pixel)    FOV (16mm; x1,x2,x4)
Dimensions & Weight	Angular accuracy	$\pm 0.1^\circ$
	Dimension	2350 x 1570 x 1900 mm (Length x Width x Height)
	Weight	1800kg

### Features



#### High Precision

- X/Y placement accuracy:  $\pm 10\text{-}25\mu\text{m} @ 3\sigma$ ;
- Theta placement accuracy:  $\pm 1^\circ @ 3\sigma$ .



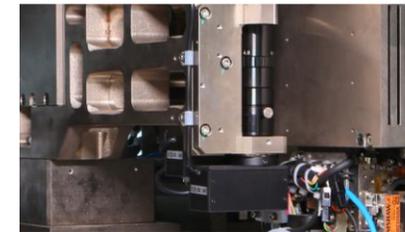
#### High Speed

- Cycle time: 230ms;
- Highly flexible dual-dispensing system, which supports different process including dipping / jetting / painting .



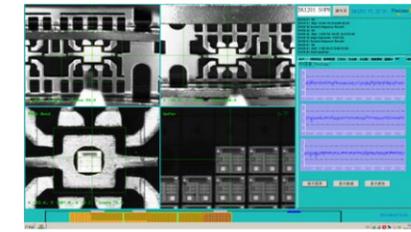
#### High Intelligent

- High intelligence. Equipped with fully automatic feeding and discharging magazine processing system that supports SEMI online communication protocol and SECS/GEM protocol;
- Automatic glue volume and bond placement compensation based on inspection system.



#### Pattern Recognition System

- 1920 x 2560pixel (Customizable);
- Multi-color;
- Angular accuracy  $\pm 0.1\text{deg}$ ;
- Highly intelligent vision system that supports automatic inspection of glue volume, shape, position and die placement.



#### Control System

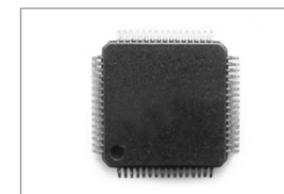
- Highly precision force control system, using VCM and encoder to control bond force. Ranging from 20~5000g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.



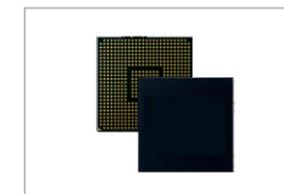
#### High Compatibility

- High compatibility. Supporting multiple formats map systems;
- High commonality. Compatible with all tooling of company A's 8312 series models;
- High customization.

### Applications



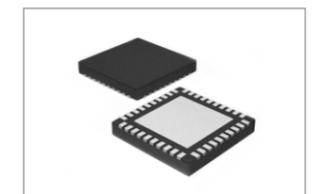
SiP



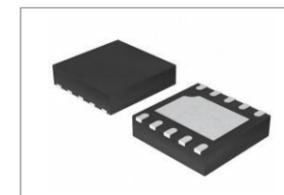
BGA



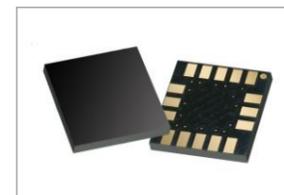
LGA



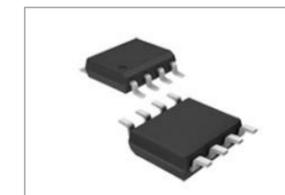
QFN



DFN



MEMS



SOP-8



TSSOP

# Flip Chip and Die Attach



## DA1201FC

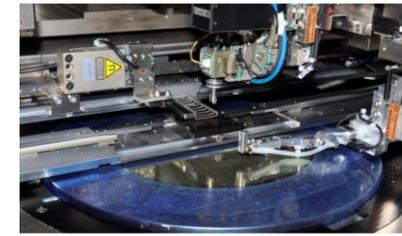
### Advantages

- Flip-chip / High-precision die attach mode:  $\pm 15\mu\text{m}@3\sigma$ ;
- Die attach mode:  $\pm 25\mu\text{m}@3\sigma$ ;
- Specially designed for flip chip devices with low pin count, such as SOIC, SO, QFN, BGA, LGA, etc. At the same time, it is equipped with die attach system;
- High-speed and high precision die bonding capability;
- MS Windows® operating system and flexible connectivity;
- Flip chip and die bonding in one machine - the conversion between the two processes is simple and easy;
- Comprehensive inspection system;
- High density lead frame handling capability.

### Specifications

	Item	DA1201FC
Flip Chip/ High Precision Die Attach Module	X/Y placement accuracy	$\pm 10\text{-}15\mu\text{m}@3\sigma$
	Theta placement accuracy	$5\text{mm}\leq\text{Die size}\leq 10\text{mm}$ $\pm 0.15^\circ@3\sigma$ ; $1\text{mm}\leq\text{Die size}\leq 5\text{mm}$ $\pm 0.3^\circ@3\sigma$ ; $0.25\text{mm}\leq\text{Die size}\leq 1\text{mm}$ $\pm 1^\circ@3\sigma$
Die Attach Module	X/Y placement accuracy	$\pm 10\text{-}25\mu\text{m}@3\sigma$
	Theta placement accuracy	Die size $\geq 1\text{mm}$ $\pm 0.5^\circ@3\sigma$ ; Die size $\leq 1\text{mm}$ $\pm 1^\circ@3\sigma$
Materials Handling Capability	Die size	0.25x0.25mm-9x9mm (Standard); 0.15x0.15mm-15x15mm (Optional)
	Substrate dimensions	Length: 100-300mm ; Width: 30-100mm; Thickness: 0.1-0.8mm (Standard) 0.8-2.0mm (Optional)
	Magazine dimensions	110-310mm x 20-110mm x 70-153mm (Length x Width x Height)
Wafer System	Wafer size	6"-12"
	Auto-theta alignment	$\pm 10^\circ$ Range
	Theta	360°
Bond Head System	Bond force	20 -500 g (Programmable)
Pattern Recognition System	PR system	Multi-color
	Resolution	1920pixel x 2560 pixel (Customizable)
	Pixel & FOV	5M (1920x2560 pixel) FOV (16mm; x1,x2,x4)
	Angular accuracy	$\pm 0.1^\circ$
Dimensions & Weight	Dimension	2350 x 1570 x 1900 mm (Length x Width x Height)
	Weight	1800kg

### Features



#### Flip Chip / High Precision Die Attach Module

- X/Y placement accuracy:  $\pm 10\text{-}15\mu\text{m}@3\sigma$ ;
- Theta placement accuracy:  
 $5\text{mm}\leq\text{Die size}\leq 10\text{mm}$   $\pm 0.15^\circ@3\sigma$ ;  
 $1\text{mm}\leq\text{Die size}\leq 5\text{mm}$   $\pm 0.3^\circ@3\sigma$ ;  
 $0.25\text{mm}\leq\text{Die size}\leq 1\text{mm}$   $\pm 1^\circ@3\sigma$ .



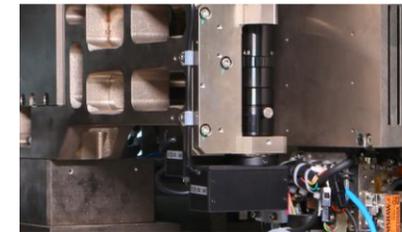
#### Die Attach Module

- X/Y placement accuracy:  $\pm 10\text{-}25\mu\text{m}@3\sigma$ ;
- Theta placement accuracy:  
Die size  $\geq 1\text{mm}$   $\pm 0.5^\circ@3\sigma$ ;  
Die size  $\leq 1\text{mm}$   $\pm 1^\circ@3\sigma$ .



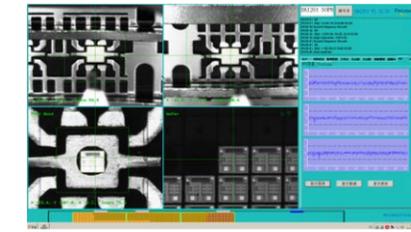
#### High Intelligent

- High intelligence. Equipped with fully automatic feeding and discharging magazine processing system that supports SEMI online communication protocol and SECS/GEM protocol;
- Automatic glue volume and bond placement compensation based on inspection system.



#### Pattern Recognition System

- 1920pixel x 2560pixel (Customizable);
- Multi-color;
- Angular accuracy  $\pm 0.1\text{deg}$ ;
- Highly intelligent vision system that supports automatic inspection of glue volume, shape, position and die placement.



#### Control System

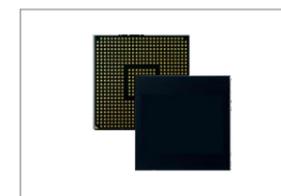
- Highly precision force control system, using VCM and encoder to control bond force. Ranging from 20~500g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.



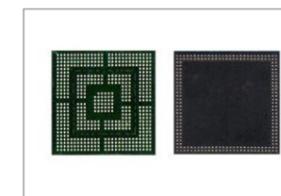
#### High Compatibility

- High compatibility. Supporting multiple formats map systems;
- High commonality. Compatible with all tooling of company A's 8312 series models;
- High customization.

### Applications



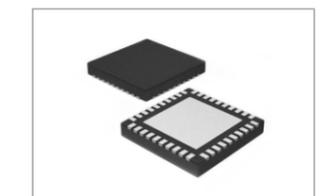
BGA



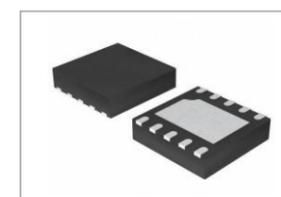
PoP



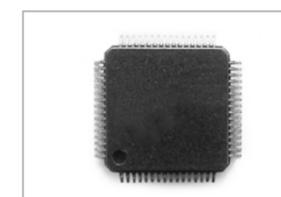
LGA



QFN



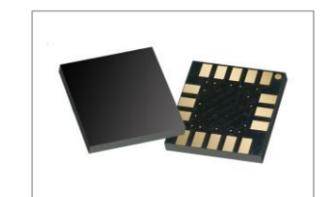
DFN



QFP



SOIC



MEMS

# IC High Speed Die Attach



## DA801 | DA801S (SiP) DA801M (MEMS)

### Advantages

- Wafer size: 6"-8";
- Dual dispensing system;
- High-precision linear driven bond head;
- Support DAF function;
- Multifunction work table, suitable for different kinds of lead frames & substrates;
- High-precision wafer table with highly accurate die rotation system and motorized wafer expansion system;
- Intelligent dispensing control system to realize precision glue volume control;
- Missing die detection and re-picking function;
- Customization for special design is also available.

### Specifications

	Item	DA801	DA801S/DA801M
System Performance	Cycle time	230ms	
	X/Y placement accuracy	±25μm@3σ (Standard)	±10-20μm@3σ (Standard)
	Theta placement accuracy	±1°@3σ	
Materials Handling Capability	Die size	0.17x0.17mm-6.25x6.25mm	
	Substrate size	Length: 110-310mm; Width: 30-105mm; Thickness: 0.2-2.5mm (More than 1mm, customized)	Length: 110-310mm; Width: 30-95mm; Thickness: 0.2-2.5mm (More than 1mm, customized)
	Magazine size	110-320mm x 35-130mm x 68-190mm (Length x Width x Height)	
Wafer System	Wafer size	6"-8"	
	Auto-theta alignment	±10° Range	
	Chip MAX Angle correction	360°	
Bond Head System	Bond force	30 -500 g (Programmable)	
Workholder System	Trackwidth	30 - 105 mm (Customizable)	
Pattern Recognition System	PR system	Multi-color	
	Resolution	640 pixel x 480 pixel (Customizable)	
	Position accuracy	±1/4 pixel (±1 um @ FOV 2 mm)	
	Angular accuracy	±0.1°	
Dimensions & Weight	Dimension	2000 x 1260x 2050 mm (Width x Depth x Height)	
	Weight	1200kg	

### Features



#### High Precision

- X/Y placement accuracy: ± 25μm @3σ (DA801); ± 10-20μm@3σ (DA801S/DA801M);
- Theta placement accuracy: ±1°@3σ.



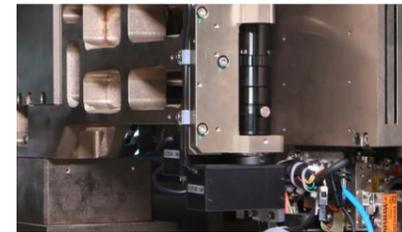
#### High Speed

- Cycle time: 230ms;
- Highly flexible dual-dispensing system, which supports different process including dipping / jetting / painting .



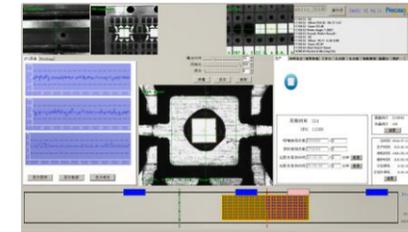
#### High Intelligent

- High intelligence. Equipped with fully automatic feeding and discharging magazine processing system that supports SEMI online communication protocol and SECS/GEM protocol;
- Automatic glue volume and bond placement compensation based on inspection system.



#### Pattern Recognition System

- 640 x 480pixel (Customizable);
- Multi-color;
- Angular accuracy ± 0.1deg;
- Highly intelligent vision system that supports automatic inspection of glue volume, shape, position and post-bonding.



#### Control System

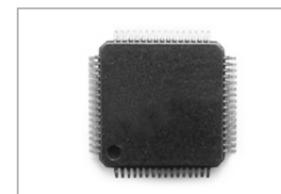
- Highly precision force control system, using VCM and encoder to control bond force. Ranging from 30~500g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.



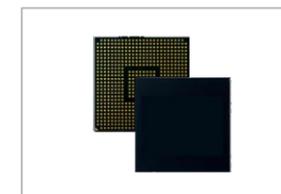
#### High Compatibility

- High compatibility. Supporting multiple formats map systems;
- High commonality. Compatible with all tooling of company A's 838 series models;
- High customization.

### Applications



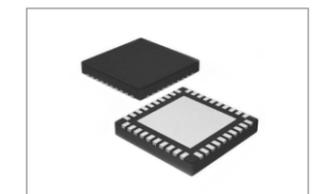
SiP



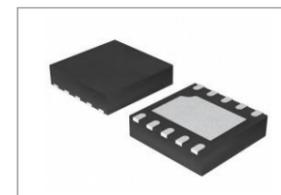
BGA



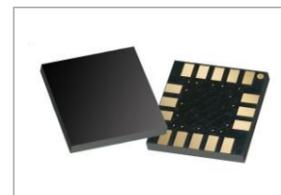
LGA



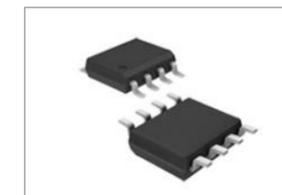
QFN



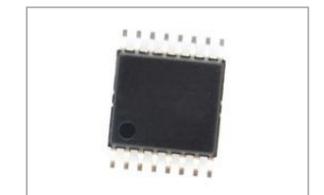
DFN



MEMS



SOP-8



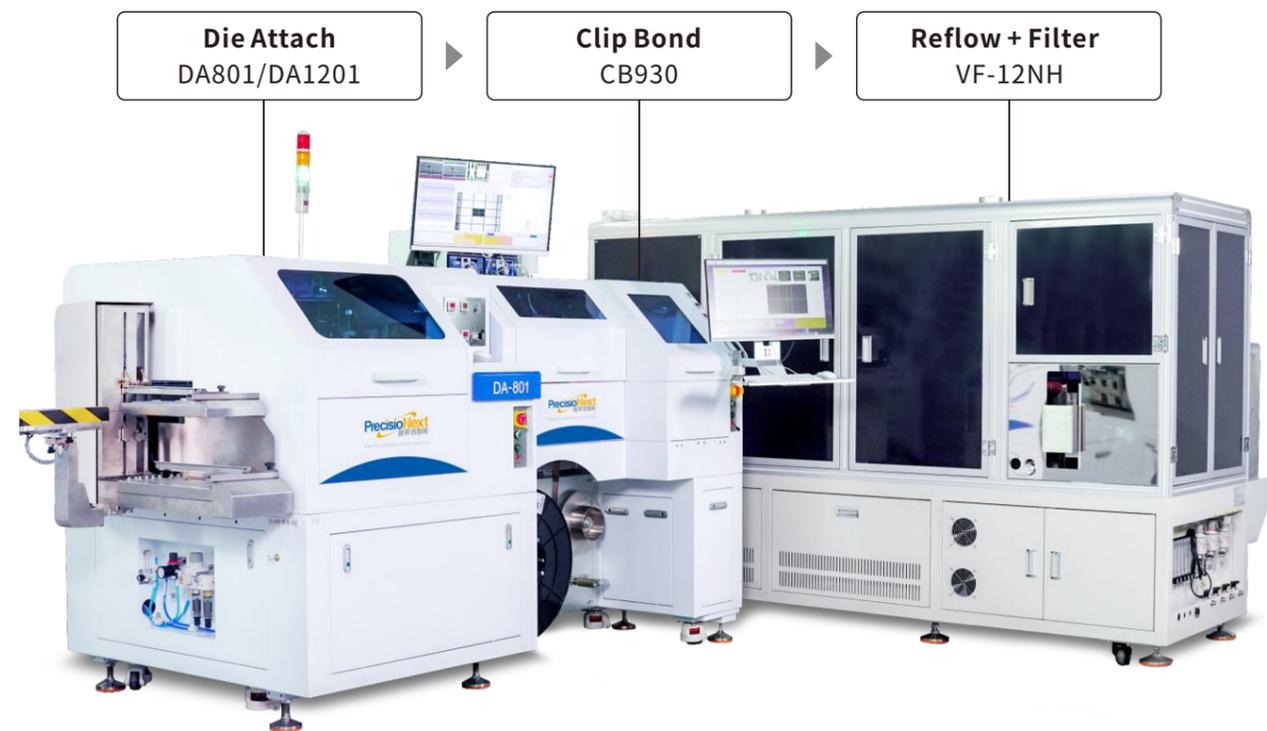
TSSOP

# High Speed Clip Bond System

# Clip Bonder

## Advantages

- Placement accuracy:  $\pm 50\mu\text{m}@3\sigma$ ,  
Theta placement accuracy:  $\pm 3^\circ@3\sigma$ ;
- Up to 20Clips/ Cycle;
- Prebond & Posbond function;
- Solder patch & solder paste inspection function;
- High precision linear drive die bond head;
- High precision clip punching system;
- The multi dispensing independent control system provides more accurate glue control, equipped with glue detection, with automatic glue filling function;
- Multiple configurations meet various market demands, as well as customization according to special demands;
- Freely match various types of reflow equipment.



## Applications

Supporting DFN, SOP, SOT, TO, SMA, SMB, SMC, SOD and other packaging forms.



## Features



### Advantages of Die Attach

- DA801/DA1201 can be configured;  
Placement accuracy:  $\pm 10\text{-}25\mu\text{m}@3\sigma$ ;
- Theta placement accuracy:  $\pm 1^\circ@3\sigma$ ;
- Stable force control system;
- Dual dispensing system, support dipping/dispensing/drawing Epoxy process.



### Advantages of Clip Bond

- Placement accuracy:  $\pm 50\mu\text{m}@3\sigma$ ;
- Theta placement accuracy:  $\pm 3^\circ@3\sigma$ ;
- Reducing packaging size;
- Improving thermal conductivity;
- As the parasitic resistance is reduced, the electrical characteristics are improved.



### Advantages of Vacuum Reflow

- Using industrial control embedded control system;
- Providing a replaceable heating module;
- Flux solder paste automatic recovery system;
- Intelligent nitrogen monitoring and controlling system.

## Specifications

System Capability						
	Die Attach		Clip Bond			
	8" Wafer	12" Wafer	Before reflow	After reflow		
XY placement accuracy	$\pm 10\text{-}25\mu\text{m}@3\sigma$		$\pm 50\mu\text{m}@3\sigma$	$\pm 100\mu\text{m}@3\sigma$		
Theta placement accuracy	$\pm 1^\circ@3\sigma$		$\pm 3^\circ@3\sigma$	$\pm 5^\circ@3\sigma$		
Material Handling Capability						
Die size (8"/12" Wafer)	0.15x0.15mm-6x6mm					
Substrate size	Length: 100-300mm ; Width: 30-100mm ; Thickness: 0.1-0.8mm (Standard) 0.8-2.0mm (Optional)					
Magazine size	Length: 20-55mm (Other size options) ; Width: 0.1-0.75mm ; Brigde Height: 3mm (Max)					
Reflow Oven						
Temperature range	Max 420°C					
Temperature zone	10 heating zones (Including a vacuum zone, the number of heating zones can be customized) 2 cooling zones (Customizable)					
Bond Hand						
Bond force						
Die attach (8"/12" Wafer)	20 -500 g (Programmable)					
Clip Bond	100 -1000 g (Programmable)					
Machine Vision						
Die attach (8"/12" Wafer)	PRsystem: Multi-color Resolution: 1920pixel*2560pixel (Customizable) Position accuracy: 5M (1920x2560 pixel) FOV (16mm;x1,x2,x4) Angular accuracy: $\pm 0.1^\circ$					
Clip Bond	PRsystem: Multi-color Resolution: 1920pixel*2560pixel (Customizable) Position accuracy: 5M (1920x2560 pixel) Angular accuracy: $\pm 0.1^\circ$					
Dimensions						
	Die Attach		Clip Bond	Reflow Oven		
	8" Wafer	12" Wafer				
Machine size	L:2000/1700mm (Include/exclude feed table) W:1260mm H:2050mm	L:2350/2050mm (Include/exclude feed table) W:1570mm H:1900mm	L:1220mm W:1260mm H:2050mm	L:1720/1520mm (Include/exclude feed table) W:2800mm H:2400mm		
Weight	1200kg	1800kg	1300kg	1500kg		
Power Requirements						
Process	VAC	Air	Trachea	LPM	Power	Other
Die Attach	200-240	71 PSI (6 bar)	10*1mm	400-600	1800W	
Clip Bond					2000W	
Reflow Oven	380 (3-phase)	71 PSI (5 bar)	12*1mm	100	Start up 25kw / Need 8kw	Nitrogen supply>15-25m <sup>3</sup> /h $\geq 4\text{kg}$ Cooling water supply>15L/min @15°C-20°C

# Ultra-high Precision Die Attach



## Light 2300 1.6T Optical Module

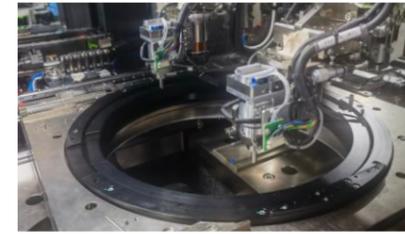
### Advantages

- High precision:  
X/Y placement accuracy:  $\pm 3\mu\text{m} @ 3\sigma$  (standard sheet  $1.5\mu\text{m}$ );  
Theta placement accuracy:  $\pm 0.1^\circ @ 3\sigma$ ;
- High speed: patch cycle  $\leq 4.5\text{S}$  (UPH  $\geq 800$ );
- Electronic control Pick/Bond Force, the maximum Bond Force is 2500g;
- Support for Die face up/face down bonding;
- Auto suction nozzle change, max 12 nozzles;
- Equipped with 5 ejector tools for various sizes of Die;
- Automatic bond force calibration function;
- Automatic wafer mapping, maximum support for 12" wafer;
- Independently controlled dual epoxy writing system, and high quantity epoxy control;
- Inline supporting with standard function;
- Class100 for cleanroom.

### Specifications

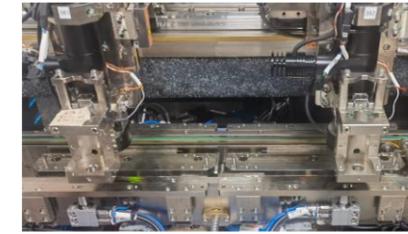
	Item	Light 2300
Equipment Characteristic	X/Y placement accuracy	$\pm 3\mu\text{m} @ 3\sigma$
	Theta placement accuracy	$\pm 0.1^\circ @ 3\sigma$
	Placement cycle time	$\leq 4.5\text{ms}$
Machine Arrangement	Bond head accuracy	Y (0.5um), Z (0.5um), Theta (0.01deg, 0°-30°)
	Wafer table accuracy	X (0.5um), Y (0.5um)
	Dispensing system	Dual module, dip glue/paint glue optional
Materials Handling Capability	Wafer size	12/8/6 inch wafer, wafer gel-pack/waffle pack/tray, support wafer cassette
	Die size	0.15mm x 0.15mm-30mm x 30mm (length-width) 0.05mm-17mm (thickness)
	Substrate size	Max. 300mm x 100mm (long x wide)
	Rail size	Max. 300mm x 100mm (long x wide)
	Number and ejector pin capacity	6 suction nozzle tool magazines, 5 ejector pin holders
	Bond force	20-2500 g (Programmable)
Pattern Recognition System	PR system	Color (256-grayscale)
	Resolution	4000pixel x 3000pixel* (Customizable)
	Visual field	6.5mm x 4.9mm
Dimensions & Weight	Dimension	1600 x 1600 x 2000mm (Length x Width x Height)
	Weight	1750kg

### Features



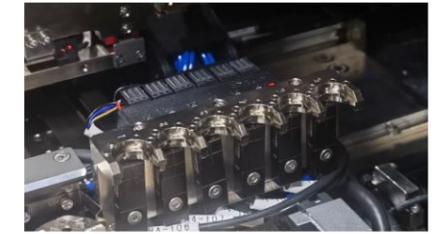
#### High Precision

- X/Y placement accuracy:  $\pm 3\mu\text{m} @ 3\sigma$ ;
- Theta placement accuracy:  $\pm 0.1^\circ @ 3\sigma$ ;
- Repositioning accuracy:  $\pm 0.5\mu\text{m} @ 3\sigma$ ;
- High precision linear motor;
- Secondary positioning platform to confirm the accuracy and angle.



#### Dual Epoxy writing System

- Independently controlled dual epoxy writing system, and high quantity epoxy control;
- Automatic wafer mapping, maximum support for 12" wafer;
- Suitable for packaging such as COB, COS, AOC, BOX, etc.



#### Auto suction nozzle change

- Auto suction nozzle change, max 12 nozzles;
- Equipped with 5 ejector tools for various sizes of Die;
- Inline supporting with standard function.



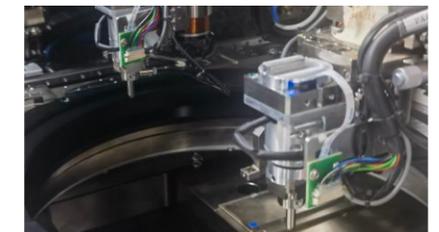
#### High Error-proof Function

- Supporting glue dispensing, glue quantity detection and alarm function;
- Auto IQC system, SECS/GEM supported.



#### Pattern Recognition System

- USB 3.0, CCD, 4000x3000pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .

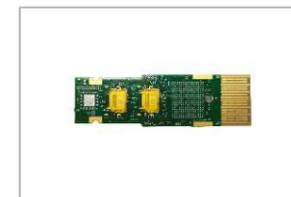


#### Control System

- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming. Ranging from 20~2500g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.

### Applications

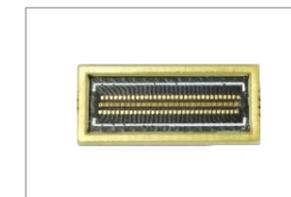
Optical module, LiDAR, Data module, HDMI, USB, TEC, TO, etc.



1.6T Optical module



100G Optical module



LiDAR



Data module



HDMI



USB



TEC



TO

# Multifunctional Ultra-high Precision Die Attach



## DA403<sup>SERIES</sup> COB/FC

### Advantages

- High Precision:  
X/Y placement accuracy:  $\pm 3\mu\text{m}$  @ $3\sigma$ ;  
Theta placement accuracy:  $< 0.1^\circ$  @ $3\sigma$ ;
- High speed:  
COB placement cycle time  $\leq 4.5\text{s}$  (Depending on the material);  
FC placement cycle time  $\leq 8\text{s}$  (Depending on the material);
- Supporting the placement of multiple wafers and AB Die of different sizes;
- Automatic nozzle changer;
- High automation, automatic loading and unloading transmission system, automatic glass sheet cyclic pick-and-place test function (BMC), etc.;
- Auto IQC system, SECS/GEM supported.

### Specifications

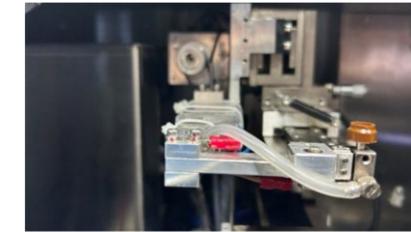
	Item	DA403-COB	DA403-FC
System Performance	X/Y placement accuracy	$\pm 3\mu\text{m}$ @ $3\sigma$	
	Theta placement accuracy	$< 0.1^\circ$ @ $3\sigma$	
	Placement cycle time	$\leq 4.5\text{s}$ (Depending on the material)	$\leq 8\text{s}$ (Depending on the material)
	Bond Head accuracy	X (0.5um), Z (0.5um), Theta (0.01deg)	
Materials Handling Capability	Wafer table accuracy	X (0.5um), Y (0.5um)	
	Wafer size	3pcs 6" Wafer Ring (Including Waffle-park and others)	
	Die size	0.15 x 0.15 - 10x10mm	
	Substrate size	50-300mm x 56-98mm x 0.7-1.6mm (Length x Width x Thickness)	
Bond Head System	Magazine size	110-320mm x 56-130mm x 68-150mm (Length x Width x Height)	
	Bond force	10 -500 g (Programmable)	
Pattern Recognition System	PR system	256-grayscale	
	Resolution	4096pixel x 3072pixel* (Customizable)	
	Angular accuracy	$\pm 0.01^\circ$	
Dimensions & Weight	Dimension	1800 x 1200x 1700mm (Length x Width x Height)	
	Weight	1220kg	

### Features



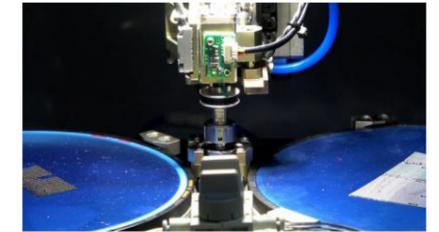
#### High Precision

- X/Y placement accuracy:  $\pm 3\mu\text{m}$  @ $3\sigma$ ;
- Theta placement accuracy:  $< 0.1^\circ$  @ $3\sigma$ ;
- Repositioning accuracy:  $\pm 0.5\mu\text{m}$  @ $3\sigma$ ;
- High precision linear motor;
- Secondary positioning platform to confirm the accuracy and angle.



#### Supports Die Attach / Flip Chip

- Supports die attach / flip chip processes, suitable for packaging such as COB, FC, AOC, BOX, etc;
- Supporting 6pcs 6" wafers and AB die of different sizes.



#### Automatic nozzle changer

- Equipped with double ejector tools;
- Optional automatic nozzle changer;
- Optional 4 dipping heads, UV curing, Closed loop force control.



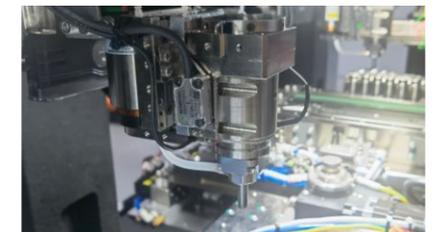
#### High Error-proof Function

- Supporting glue dispensing, glue quantity detection and alarm function;
- Auto IQC system, SECS/GEM supported.



#### Pattern Recognition System

- USB 3.0, CCD, 4096x3072 pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .



#### Control System

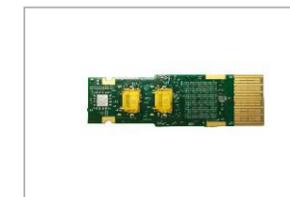
- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming. Ranging from 10~500g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.

### Applications

Optical module, LiDAR, Data module, HDMI, USB, TEC, TO, etc.



100G Optical module



400G Optical module



LiDAR



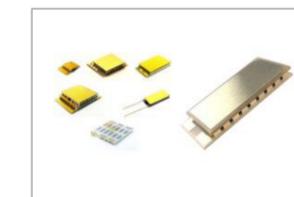
Data module



HDMI



USB



TEC



TO

# High Precision Eutectic Die Bonder



## EU403 COC

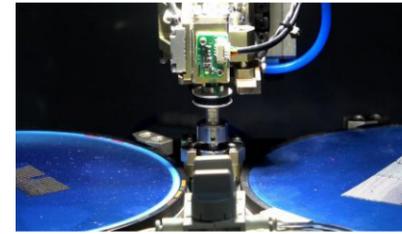
### Advantages

- High Precision: X/Y placement accuracy:  $\pm 3\mu\text{m}$  @ $3\sigma$ ; Theta placement accuracy:  $< 0.1^\circ$  @ $3\sigma$ ;
- High speed: COC placement cycle time  $\leq 10\text{s}$  (Excluding temperature curve);
- Supporting the placement of multiple wafers and AB Die of different sizes;
- Automatic nozzle changer;
- High automation, automatic loading and unloading transmission system, automatic glass sheet cyclic pick-and-place test function (BMC), etc.;
- Auto IQC system, SECS/GEM supported.

### Specifications

	Item	EU403
System Performance	X/Y placement accuracy	$\pm 3\mu\text{m}$ @ $3\sigma$
	Theta placement accuracy	$< 0.1^\circ$ @ $3\sigma$
	Placement cycle time	$\leq 10\text{s}$ (Excluding temperature curve)
	Bond Head accuracy	X (0.5um), Z (0.5um), Theta (0.01deg)
Materials Handling Capability	Wafer table accuracy	X (0.5um), Y (0.5um)
	Wafer size	3pcs 6" Wafer Ring (Including Waffle-park and others)
	Die size	0.15 x 0.15 - 10x10mm
	Substrate size	50-300mm x 56-98mm x 0.7-1.6mm (Length x Width x Thickness)
Bond Head System	Magazine size	110-320mm x 56-130mm x 68-150mm (Length x Width x Height)
	Bond force	10 - 500 g (Programmable)
Pattern Recognition System	PR system	256-grayscale
	Resolution	4096pixel x 3072pixel* (Customizable)
	Angular accuracy	$\pm 0.01^\circ$
Dimensions & Weight	Dimension	1800 x 1200 x 1700mm (Length x Width x Height)
	Weight	1220kg

### Features



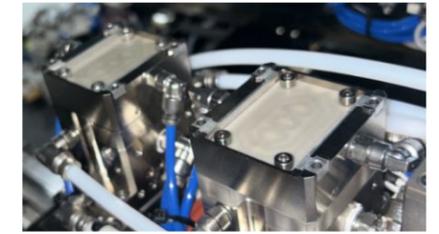
#### High Precision

- X/Y placement accuracy:  $\pm 3\mu\text{m}$  @ $3\sigma$ ;
- Theta placement accuracy:  $< 0.1^\circ$  @ $3\sigma$ ;
- Repositioning accuracy:  $\pm 0.5\mu\text{m}$  @ $3\sigma$ ;
- High precision linear motor;
- Secondary positioning platform to confirm the accuracy and angle.



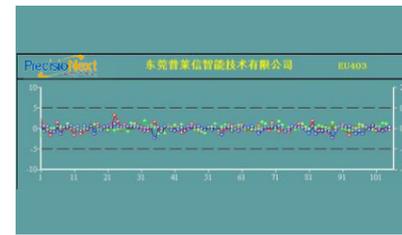
#### Supporting Multiple Wafers

- Supporting 6pcs 6" wafers and AB die of different sizes;
- Equipped with double ejector tools;
- Optional automatic nozzle changer;
- Closed loop force control (customizable).



#### Dual Eutectic Welding System

- The temperature rise and fall of ultra fast eutectic welding, with a maximum of  $450^\circ\text{C}$  and the speed of temperature rise is  $50-80^\circ\text{C/s}$ ;
- Equipped with nitrogen protection gas, real-time display of temperature curve.



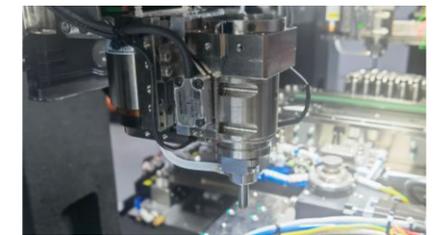
#### High Error-proof Function

- Supporting glue dispensing, glue quantity detection and alarm function;
- Auto IQC system, SECS/GEM supported.



#### Pattern Recognition System

- USB 3.0, CCD, 4096x3072 pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .

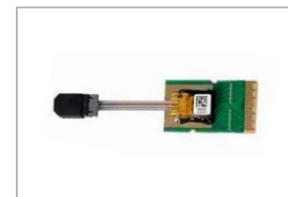


#### Control System

- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming. Ranging from 10~500g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.

### Applications

Optical module, LiDAR, Data module, HDMI, USB, TEC, TO, etc.



100G Optical module



400G Optical module



LiDAR



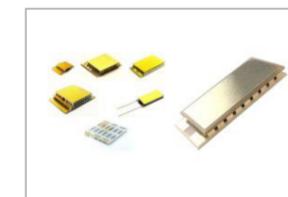
Data module



HDMI



USB



TEC



TO

# Ultra-high Precision Die Attach



## DA402 UPH: 1000\*

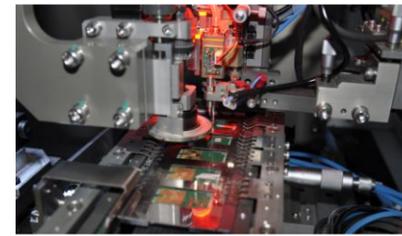
### Advantages

- High Precision:
  - X/Y placement accuracy:  $\pm 3\mu\text{m} @ 3\sigma$ ;
  - Theta placement accuracy:  $\pm 0.3^\circ @ 3\sigma$ ;
- High speed: placement cycle time  $\leq 3.6\text{s}$  (depending on the material);
- Supporting the placement of multiple wafers and AB Die of different sizes;
- Automatic nozzle changer;
- High automation, automatic loading and unloading transmission system, automatic glass sheet cyclic pick-and-place test function (BMC), etc.;
- Auto IQC system, SECS/GEM supported.

### Specifications

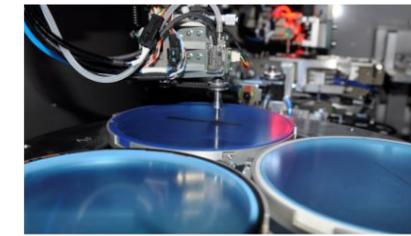
	Item	DA402
System Performance	X/Y placement accuracy	$\pm 3\mu\text{m} @ 3\sigma$
	Theta placement accuracy	$\pm 0.3^\circ @ 3\sigma$
	Placement cycle time	$\leq 3.6\text{s}$ (depending on the material)
	Bond Head accuracy	X (0.5um), Z (0.5um), Theta (0.01deg)
Materials Handling Capability	Wafer table accuracy	X (0.1um), Y (0.1um)
	Wafer size	3pcs 6" Wafer Ring (Including Waffle-park and others)
	Die size	0.15 x 0.15- 8x8mm
	Substrate size	50-175mm x 56-90mm x 0.7-1.6mm (Length x Width x Thickness)
Bond Head System	Magazine size	110-320mm x 56-130mm x 68-190mm (Length x Width x Height)
	Bond force	20 -800 g (Programmable)
Pattern Recognition System	PR system	256-grayscale
	Resolution	2448pixel x 2048pixel* (Customizable)
	Angular accuracy	$\pm 0.01^\circ$
Dimensions & Weight	Dimension	1320 x 1120x 1760mm (Length x Width x Height)
	Weight	980kg

### Features



#### High Precision

- X/Y placement accuracy:  $\pm 3\mu\text{m} @ 3\sigma$ ;
- Theta placement accuracy:  $\pm 0.3^\circ @ 3\sigma$ ;
- Repositioning accuracy:  $\pm 0.5\mu\text{m} @ 3\sigma$ ;
- High precision linear motor;
- Secondary positioning platform to confirm the accuracy and angle.



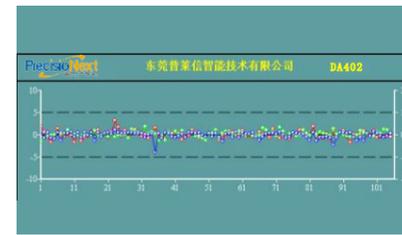
#### High Speed

- Placement cycle time  $\leq 3.6\text{s}$  (depending on the material);



#### High Automation

- Available to choose from top-view or bottom-view vision system for automatic positioning;
- Automatic loading and unloading transmission system;
- Automatic glass sheet cyclic pick-and-place test function (BMC).



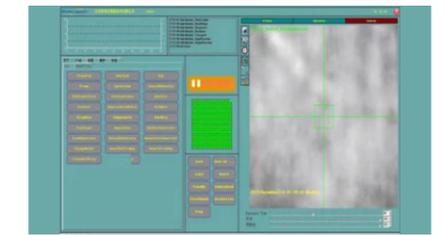
#### High Error-proof Function

- Supporting glue dispensing, glue quantity detection and alarm function;
- Auto IQC system, SECS/GEM supported.



#### Pattern Recognition System

- USB 3.0, CCD, 2448x2048 pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .

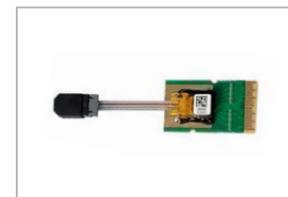


#### Control System

- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming. Ranging from 20~800g (Programmable);
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.

### Applications

Optical module, LiDAR, Data module, HDMI, USB, TEC, TO, etc.



100G Optical module



400G Optical module



LiDAR



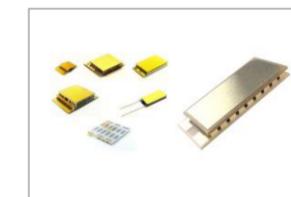
Data module



HDMI



USB



TEC



TO

# High Precision Lens Attach



## Lens Bonder

### Advantages

- High Precision:  
X/Y placement accuracy:  $\pm 5\mu\text{m} @ 3\sigma$ ;  
Theta placement accuracy:  $\pm 0.1^\circ @ 3\sigma$ ;
- High speed: Placement cycle time  $\leq 20\text{ S}$  (depending on UV curing time);
- With UV pre-curing and automatic dispensing glue;
- Unique detection function after LENS suction;
- High automation, automatic loading and unloading transmission system, automatic glass sheet cyclic pick-and-place test function (BMC), etc.

### Specifications

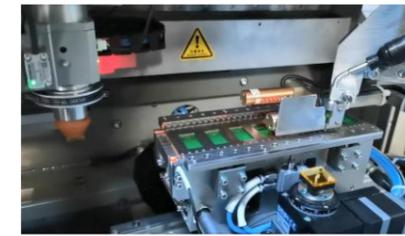
	Item	Lens Bonder
System Performance	X/Y placement accuracy	$\pm 5\mu\text{m} @ 3\sigma$
	Theta placement accuracy	$\pm 0.1^\circ @ 3\sigma$
	Placement cycle time	$20\text{ S} \leq$ (Depending on UV curing time)
	UPH	160pcs/h (Depending on UV curing time)
Materials Handling Capability	LENS Size	6x 6-15x15mm (specific requirements)
	Substrate size	50-200mm x 50-75mm (Length x Width)
Pattern Recognition System	Positioning accuracy	0.5um
	Resolution	0.1um
Machine Electrical	Voltage	220V
	Power	About 2KW
	Frequency	50Hz
	Air pressure	$> 4.5\text{MPa}$
Dimensions & Weight	Dimension	1880 x 1150 x 1720 mm (Width x Depth x Height)
	Weight	1400kg

### Features



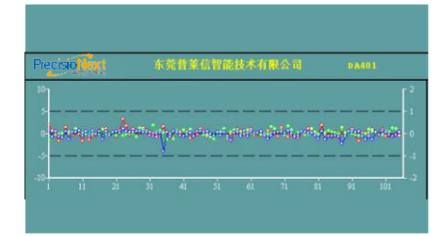
#### High Precision

- X/Y placement accuracy:  $\pm 5\mu\text{m} @ 3\sigma$ ;
- Theta placement accuracy:  $\pm 0.1^\circ @ 3\sigma$ ;
- High precision linear motor;
- Secondary positioning platform to confirm the accuracy and angle.



#### High Speed

- Placement cycle time  $\leq 20\text{ S}$  (depending on UV curing time).



#### Detection Function

- Unique detection function after LENS suction;
- With UV pre-curing and automatic dispensing glue.



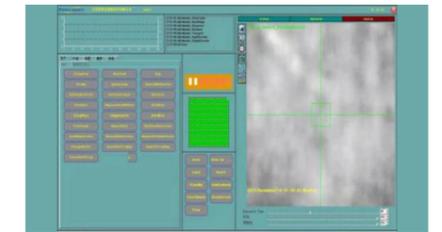
#### High Automation

- Available to choose from top-view or bottom-view vision system for automatic positioning;
- Automatic loading and unloading transmission system;
- Automatic glass sheet cyclic pick-and-place test function (BMC).



#### Pattern Recognition System

- USB 3.0, CCD, 2448x2048 pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .



#### Control System

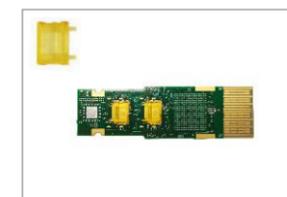
- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming. Ranging from 20~800g (Programmable);
- Friendly operation interface.

### Applications

Optical module, HDMI, USB, etc.



Optical module



400G Optical module



HDMI



USB

# Ultra-high Precision Die Attach



## Lion 2300

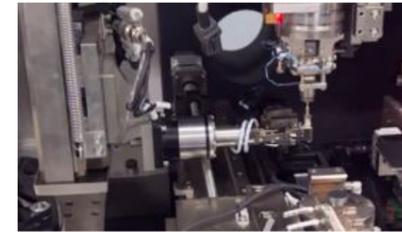
### Advantages

- High Precision: X/Y placement accuracy:  $\pm 5\mu\text{m}$  @  $3\sigma$ ; Theta placement accuracy:  $\pm 0.1^\circ$  @  $3\sigma$ ;
- High speed: placement cycle time  $\leq 900\text{ms}$ ;
- Flip chip/ High-precision die attach mode;
- Automatic nozzle changer;
- Auto force calibration;
- Auto wafer load/unload, Max 8" wafer; map supporting;
- Support DAF function: Max 300°C;
- High precision jetting/ dispensing Epoxy process;
- High automation, auto loading and unloading transmission system;
- Auto IQC system, SECS/GEM supported..

### Specifications

	Item	Lion 2300
System Performance	X/Y placement accuracy	$\pm 5\mu\text{m}$ @ $3\sigma$
	Theta placement accuracy	$\pm 0.1^\circ$ @ $3\sigma$
	Placement cycle time	$\leq 900\text{ms}$
	Bond head accuracy	X (0.5um), Y (0.1um), Z (0.5um), Theta (0.01deg)
	Wafer table accuracy	X (0.5um), Y (0.5um)
Materials Handling Capability	Wafer size	Max 8" (203mm) wafer on expander or clamp ring Option: Waffle pack, Gel-Pak, tray, tape feeder or by request
	Die size	0.15 x 0.15 - 5x7mm
	Substrate size	50-280mm x 50-110mm x 0.5-2.0mm (Length x Width x Thickness)
	Magazine size	100-300mm x 60-115mm x 50-135mm (Length x Width x Height)
Bond Head System	Pick	40 -250 g (Adjustable)
	Bond	30 -250 g (Programmable)
Pattern Recognition System	PR system	Color(256-grayscale)
	Resolution	4096pixel x 3072pixel* (Customizable)
	Angular accuracy	$\pm 0.01^\circ$
Dimensions & Weight	Dimension	1600 x 1600x 2000mm (Length x Width x Height)
	Weight	1750kg

### Features



#### High Speed & High Precision

- X/Y placement accuracy:  $\pm 5\mu\text{m}$  @  $3\sigma$ ;
- Theta placement accuracy:  $\pm 0.1^\circ$  @  $3\sigma$ ;
- Placement cycle time:  $\leq 900\text{ms}$ ;
- Support: Flip chip/ High-precision die attach;
- Dual positioning: X/Y & Theta placement.



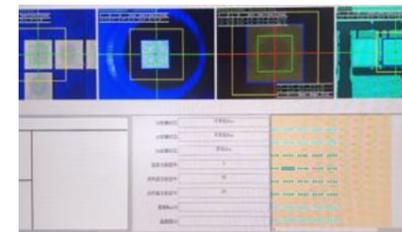
#### Multiples Wafers

- Standard: Wafer on expander or clamp ring;
- Optional: Waffle pack, Gel-Pak, tray, tape feeder or by request;
- Substrate, wafer scanning, tracability improving.



#### High Precision Dispensing System

- Intelligent dispensing control system, painting customized;
- Precision glue volume control & alarm function;
- Support DAF function: Max 300°C.



#### Pattern Recognition System

- USB 3.0, CCD, 4096x3072 pixel;
- Color(256-grayscale);
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .



#### Control System

- High stable force control system, using VCM and encoder to control bond force, Can adjust the force by programming;
- Auto bond force control calibration.



#### Nozzle Change

- Automatic nozzle changer;
- High precision DD motor align table.

### Applications

High power LED, Optical module, LiDAR, Data module, HDMI, USB, TEC, etc.



High power LED



High power LED



Optical module



LiDAR



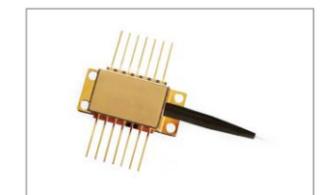
USB



HDMI



Data module



Laser component

# High Precision Eutectic Die Bonder



## EU 2300

### Features

- High Precision:
  - X/Y placement accuracy:  $\pm 7\mu\text{m}$  @ $3\sigma$ ;
- Theta placement accuracy:  $\pm 1^\circ$  @ $3\sigma$  (Die size  $> 0.5\text{mm}$ ),  $\pm 3^\circ$  @ $3\sigma$  (Die size  $\leq 0.5\text{mm}$ );
- High speed: cycle time  $< 600\text{ms}$ ;
- Auto wafer load/unload, Max 8" wafer; map supporting;
- Multiple material support;
- Excellent void control; H<sub>2</sub> forming gas handling;
- Substrate preheating and heating function (Maximum heating temperature of 330 °C);
- High automation, auto loading and unloading transmission system;
- Auto IQC system, SECS/GEM supported..

### Specifications

	Item	EU 2300
System Performance	X/Y placement accuracy	$\pm 7\mu\text{m}$ @ $3\sigma$
	Theta placement accuracy	$\pm 1^\circ$ @ $3\sigma$ (Die size $> 0.5\text{mm}$ ); $\pm 3^\circ$ @ $3\sigma$ (Die size $\leq 0.5\text{mm}$ )
	Placement cycle time	$< 600\text{ms}$
	Bond Head accuracy	X (0.5 $\mu\text{m}$ ), Y (0.1 $\mu\text{m}$ ), Z (0.5 $\mu\text{m}$ ), Theta (0.01deg)
	Wafer table accuracy	X (0.5 $\mu\text{m}$ ), Y (0.5 $\mu\text{m}$ )
Materials Handling Capability	Wafer size	Max 8" (203mm) wafer on expander or clamp ring
	Die size	0.15 x 0.15 - 8x8mm
	Substrate size	50-150mm x 50-110mm x 0.5-2.0mm (Length x Width x Thickness)
	Magazine size	80-160mm x 50-115mm x 50-150mm (Length x Width x Height)
Bond Head System	Pick	40 -250 g (Adjustable)
	Bond	30 -1500 g (Programmable)
Pattern Recognition System	PR system	Color(256-grayscale)
	Resolution	4096pixel x 3072pixel* (Customizable)
	Angular accuracy	$\pm 0.01^\circ$
Dimensions & Weight	Dimension	1600 x 1600x 2000mm (Length x Width x Height)
	Weight	1750kg

### Features



#### High Speed & High Precision

- X/Y placement accuracy:  $\pm 7\mu\text{m}$  @ $3\sigma$ ;
- Theta placement accuracy:  $\pm 1^\circ$  @ $3\sigma$  (Die size  $> 0.5\text{mm}$ ),  $\pm 3^\circ$  @ $3\sigma$  (Die size  $\leq 0.5\text{mm}$ );
- Cycle time:  $< 600\text{ms}$ ;
- Support: Flip chip/ High-precision die attach;
- Dual positioning: X/Y & Theta placement.



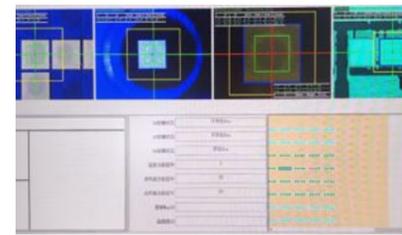
#### Multiple Materials

- Standard: Wafer on expander or clamp ring;
- Optional: Waffle pack, Gel-Pak, tray, tape feeder or by request;
- Substrate, wafer scanning, tracability improving.



#### Temperature control system

- Excellent void control;
- Closed track, excellent airtightness and H<sub>2</sub> forming gas control;
- Substrate preheating and heating function (Maximum heating temperature of 330 °C  $\pm$  5°C).



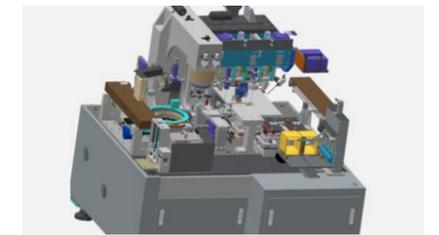
#### Pattern Recognition System

- USB 3.0, CCD, 4096x3072 pixel; Color(256-grayscale);
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .



#### Automation

- High automation, auto loading and unloading transmission system, Support SMEMA online communication protocol, SECS/GEM supported;
- High intelligence, capable of automatically compensating for placement position based on die attach detection.

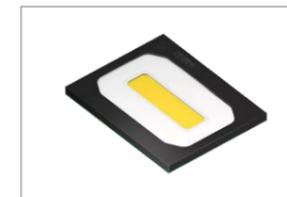
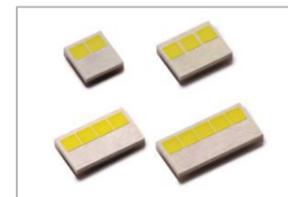


#### High Compatibility

- High compatibility, support multiple format map systems, file traceability, and product traceability;
- Customizable to different customer requirements.

### Applications

High power LED, etc.



# Camera Module Attach

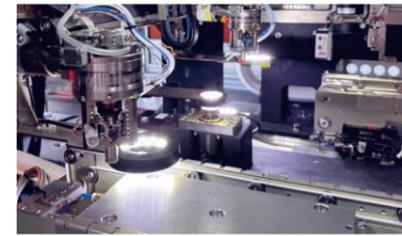


## Lion 2600

### Advantages

- High Precision:  
X/Y placement accuracy:  $\pm 5\mu\text{m}@3\sigma$ ;  
Theta placement accuracy:  $\pm 0.15^\circ@3\sigma$ ;
- High Speed:  
Placement cycle time  $\leq 2\text{s}$  (Depending on the material);
- Support feeder, tray and wafer;
- High-precision dispensing control system;
- Dispensing auto-tuning and auto calibration;
- Fully closed-loop force control system;
- High-precision bond head, heater bond arm optional;
- Optional UV pre-curing function (with automatic UV energy calibration);
- Optional dual production line;
- Class 100 cleanliness.

### Features



#### High Speed and High Precision

- Placement accuracy:  $\pm 5\mu\text{m}@3\sigma$ ;
- Theta placement accuracy:  $\pm 0.15^\circ@3\sigma$ ;
- Placement cycle time  $\leq 2\text{s}$ ,  $\leq 8\text{s}$  (Excluding temperature curve);
- High Precision Linear Motor;
- Secondary positioning stage.



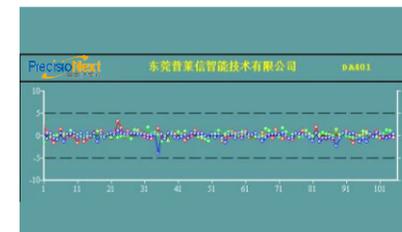
#### Loading and Unloading Way

- Support feeder, tray and wafer;
- 2 feeder magazines, no downtime for material changes.



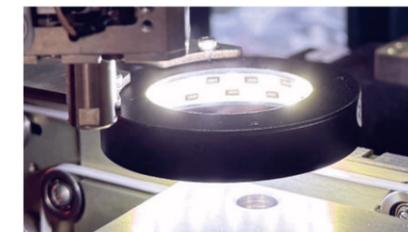
#### High Precision Dispensing System

- High precision dispensing control system, supporting custom drawing patterns;
- Dispensing auto-tuning and auto calibration;
- Support glue dispensing, glue quantity detection and alarm function.



#### Operating System

- Auto IQC system, SECS/GEM supported.
- Friendly operation interface that supports EPOXY IQC and POST IQC graphic display.



#### Pattern Recognition System

- USB 3.0, CCD, 4096x3072pixel;
- 256-grayscale;
- Supporting gray value template, custom shape template, standard shape template positioning;
- Custom search for ROI;
- Sub-pixel alignment accuracy;
- Angular accuracy is  $\pm 0.01\text{deg}$ .



#### Control System

- Highly stable force control system, using VCM and encoder to control bond force. Can adjust the force by programming;
- High-precision bond head, heater bond arm optional.

### Specifications

	Item	Lion 2600
System Performance	X/Y placement accuracy	$\pm 5\mu\text{m}@3\sigma$
	Theta placement accuracy	$< 0.15^\circ@3\sigma$
	Placement cycle time	$\leq 8\text{s}$ (Excluding temperature curve) $\leq 2\text{s}$
	Bond Head accuracy	X (1um), Y(1um), Z (1um), Theta (0.01deg)
	Dispensing accuracy	X ( $\pm 5\mu\text{m}$ ), Y ( $\pm 5\mu\text{m}$ )
Materials Handling Capability	Die size	0.15 x 0.15- 15x15mm
	Substrate size	110mm x 200mm (Max.)
	Feeder	2
Bond Head System	Bond force	0.3-10N
	PR system	256-grayscale
Vision System	Resolution	4096pixel x 3072pixel*Customizable
	Angular accuracy	$\pm 0.01^\circ$
	Dimension	1480 x 1460x 2240mm (Length x Width x Height)
Dimensions & Weight	Weight	2100kg

### Applications

Camera submodules (VCM, telescopic, OIS,...) assemble.





# Turnkey Service

Provide one-stop comprehensive technical support, 360° “worry-free” turnkey service, and continuously create maximum economic value for customers.

- High quality service
- Thoughtful service guarantee
- Comprehensive service system
- Rich service experience
- Standard service process
- Professional service team



### Sample Design

Provide pre-sales sample design and customized services, making customers rest assured.



### Demo Service

Free pre-sales demo service. Making sure the client confidentiality is not leaked.



### Support Mass Production

Provide on-site installation, debugging, and mass production service, and 7/24 technical support service.



### Technical Training

Free training for equipment function, equipment terminal and backend programming, equipment process parameter usage and equipment maintenance management.



## Turnkey Service



### Software Upgrade

Lifelong software update service for customers, guarantee the best quality service (hardware support required).



### Customized Service

Open custom interface, Accept the customized needs of special customers.



### Parts Support

Provide quality repair and replacement of spare parts and wearing parts.



### After-sales Service

Set up customer profile for each machine, regularly remind customers of equipment maintenance, to improve service quality.

### Service Hotline

0769-26622766-816

Work hours: 8:30-18:00

