

关于我们

The Mech-Eye Nano industrial 3D camera has been upgraded with ultra-small size, ultra-high precision, and excellent resistance to ambient light

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Recently, Mech-Mind officially released a new generation of Mech-Eye Nano ultra-small industrial 3D camera. The new Mech-Eye Nano offers even more performance: **ultra-high precision, faster scanning speeds, and excellent resistance to ambient light**. It can better meet the needs of refined operation scenarios such as **positioning and assembly, high-precision grabbing**, etc. **At present, Mech-Eye Nano has been successfully deployed in hundreds of applications around the world, including multiple joint venture automotive OEMs.**



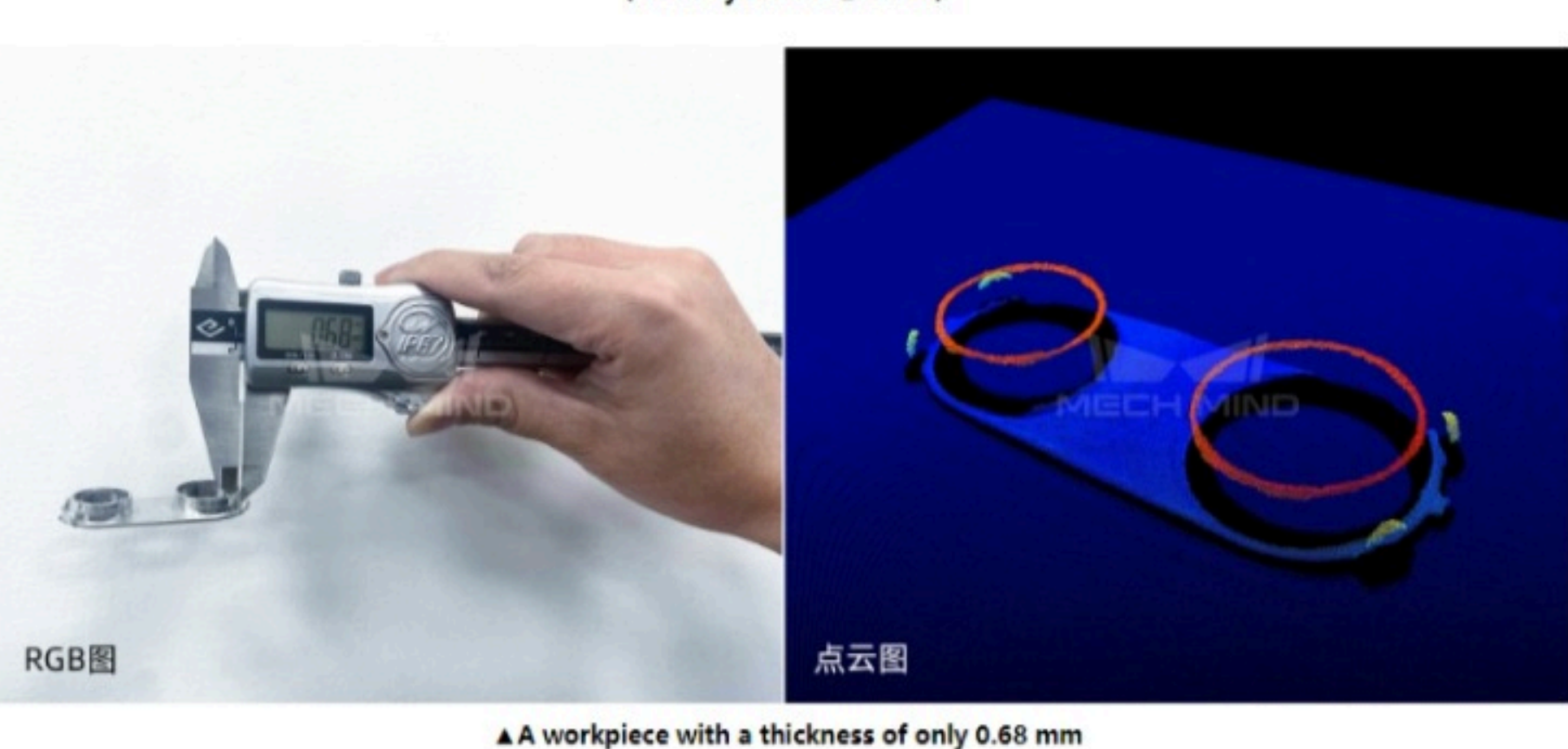
Performance upgrades

01 Ultra-high precision, faster scanning speed, better imaging results

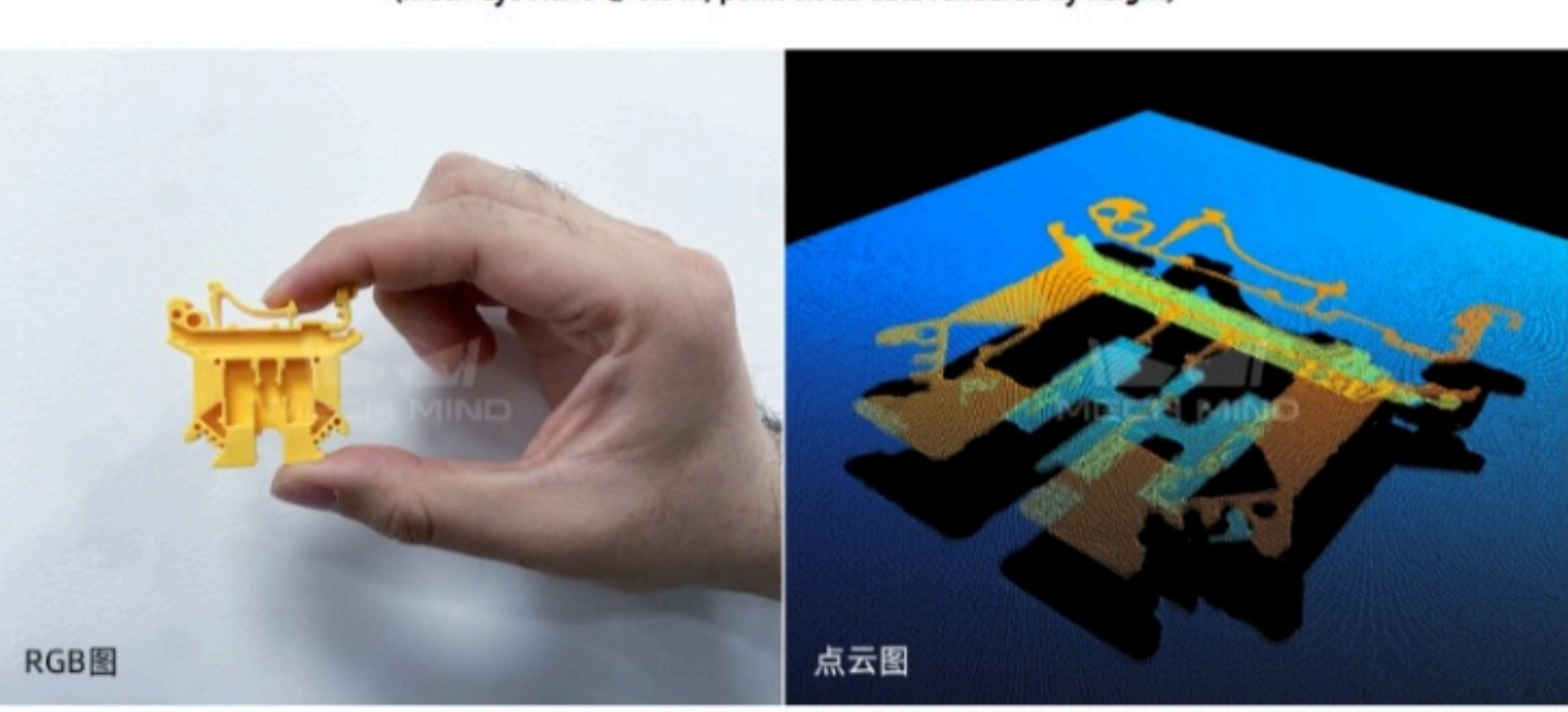
With an accuracy of **0.1 mm @ 0.5 m**, the newly upgraded Mech-Eye Nano can generate **accurate, complete and detailed** high-quality point cloud data for various typical workpieces **in the centimeter/millimeter range**, effectively coping with **complex working conditions such as dark/light absorption, a certain degree of reflection, and precise structure**. Using the self-developed high-speed structured light technology, the time from taking a photo to acquiring 3D data is reduced to 0.6 s, which fully meets the actual needs of typical application scenarios.



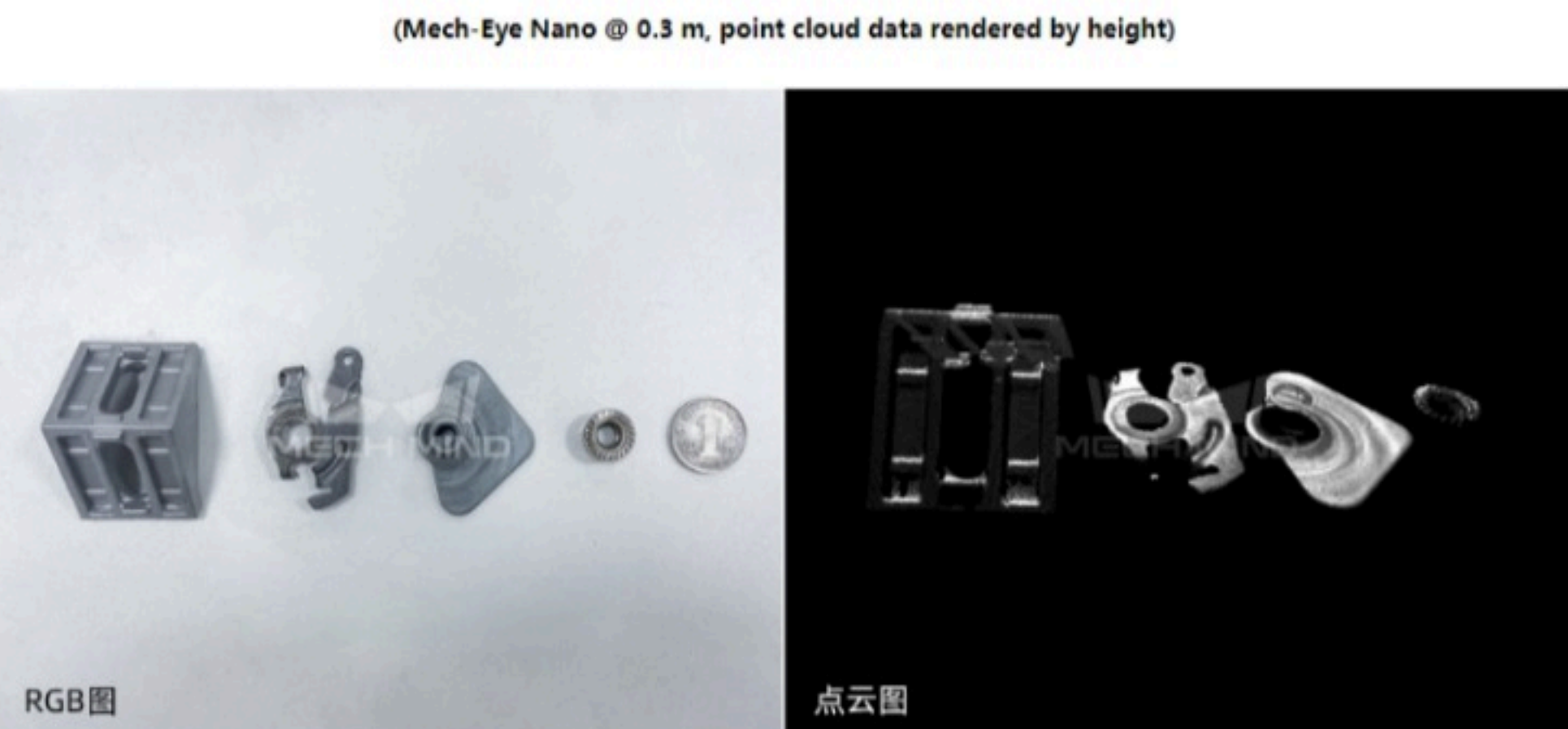
▲ Small screw
(Mech-Eye Nano @ 0.3 m)



▲ A workpiece with a thickness of only 0.68 mm
(Mech-Eye Nano @ 0.3 m, point cloud data rendered by height)



▲ Precision components
(Mech-Eye Nano @ 0.3 m, point cloud data rendered by height)



▲ All kinds of small workpieces
(Mech-Eye Nano @ 0.3 m)

02 Excellent resistance to ambient light

The newly upgraded Mech-Eye Nano is highly resistant to ambient light and can produce **structurally complete, detailed, and well-bounded** high-quality 3D data on a wide range of typical workpieces under ambient light at **>60000 lx** (the typical sunlight experienced in a manufacturing plant in summer). **It is very suitable for various scenarios (such as outdoor, semi-outdoor, window and other working environments) that are easily disturbed by ambient light in automobiles, semiconductors and other fields.**



From left to right: Small dark part, indoor natural light, >60000 lx bottom image
(Mech-Eye Nano @ 0.3 m)



From left to right: Small iron casting, indoor natural light, >60000 lx bottom image
(Mech-Eye Nano @ 0.3 m)

03 Ultra-small size, light weight, suitable for all kinds of fine operation scenarios

Mech-Eye Nano is ultra-small (**only 145*51*85 mm**) and weighs as little as **0.7 kg**, which can be easily installed at the end of **robotic arms (including collaborative robots, composite robots, etc.)**. It has high flexibility and supports working in **small spaces (such as drawers, material frames, etc.)**, and has been widely used in fine operation scenarios such as **positioning and assembly, high-precision grabbing**, etc.



04 Industrial-grade design to better meet the challenges of actual industrial sites

The Mech-Eye Nano industrial 3D camera is made of aerospace aluminum alloy and has a new fully enclosed housing, which reduces weight and strength while ensuring high strength and rigidity. **It adopts IP65 protection level**, and has passed a number of international certifications such as **CE, FCC, VCCI and RoHS**, which can better cope with dust, vibration, humidity, electromagnetic interference, high temperature and other harsh environments.



05 Easy to use, open, and quick to deploy

Mech-Eye Nano provides a choice of SDKs in multiple languages and platforms, with open interfaces and simple deployment. It can be used with Mech-Vision graphical machine vision software and Mech-Viz robot intelligent programming environment to easily and quickly deploy various complex intelligent robot applications.

06 Still very cost-effective

The Mech-Eye Nano offers further performance while still maintaining a high price-performance ratio. It's easier to use, easier to operate, and the price is still very competitive.

Product parameters



推荐工作距离范围	300 - 600 mm
近场视场	220 × 160mm @ 0.3 m
远场视场	430 × 320mm @ 0.6 m
分辨率	1280 × 1024
标定精度	0.1 mm @ 0.5 m
典型采集时间	0.6 ~ 1.1 s
外形尺寸	145 × 51 × 85 mm
重量	0.7 kg

An example of an application scenario

Vision-Guided EV Charging | A large new energy enterprise

Application pain points: small charging socket and ambient light interference on site.



Actual case site: in an outdoor environment, there is obvious sunlight interference



From left to right: Car charging outlet, indoor natural light, >60000 lx

- Mech-Eye Nano is an industrial-grade 3D camera with light weight and ultra-small size, which can be mounted on a composite robot with high flexibility.
- Mech-Eye Nano has high accuracy and excellent resistance to ambient light, and can still generate high-quality point cloud data at the black charging port in outdoor and sunny environments (> 60000 lx).
- With Mechmind 3D vision system, the robot can locate the charging interface with high precision and insert the plug accurately to complete the car charging.

Professional Services

Mech-Mind is committed to helping its business partners improve their competitiveness. In addition to high-performance industrial-grade 3D cameras and supporting platform software products, we also provide partners with **personnel training, reference program design, exhibition support, key and difficult project research** and other services, and can provide global users with 7*24 hours of after-sales rapid response and support, helping many robot solution providers/integrators to create a variety of intelligent robot applications in a multiple, fast, good and economical way.

Depending on the user's needs, we can provide a color point cloud version of the Mech-Eye Nano. At the same time, Mech-Eye Nano has opened the prototype loan service, if you have a need for borrowing and testing, please leave a message in the article, or contact your corresponding sales, we are willing to serve you wholeheartedly.

Previous:Expansion 150%! The customer service capabilities of Mech-Mind Shanghai Sales & Delivery Center have been upgraded

Next:The long-distance 3D camera flagship Mech-Eye Laser has been upgraded to better meet the speed and resistance of industrial sites

products	Application examples
Mech-Eye Industrial 3D cameras	Car
Mech-Eye 3D line laser profilometer	logistics
Mech-Vision machine vision software	Heavy industry
Mech-Viz robot programming software	Appliances/furniture
Mech-DLK deep learning software	In-line measurement
Mech-MSR 3D measurement and inspection software	Industrial quality inspection
solution	
3D visually guided depalletizing	
3D vision guides the loading of the workpiece	
3D vision-guided positioning assembly	
High-precision in-line measurement	
Industrial quality inspection	
3D vision guidance automatically generates trajectories	
3D vision guides item picking	
3D visual guidance for parcel delivery	
3D vision guides the cutting and cutting of steel plates	
Value provider cooperation	

Company address	Addresses of other branches
- 1st Floor, Building 2, Independent Innovation Building, No. 6 Chuangye Road, Haidian District, Beijing	- Changsha →
- No. 485, Xiangjiang Highway, Rading District, Shanghai, No. 2#, 5#	- Hangzhou →
- 1260 Iroquois Avenue, Naperville, Illinois	- Guangzhou →
	- Zhengzhou →
	- Zibo →
USA, Suite 300	
- 15 Industrial StraÙe Gernering, Munich, Germany	
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- 6-1-1 Helwajima, Ota-ku, Tokyo Logistics Building A Building 3F, AE3-N (Training Center, Exhibition Hall)	
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