

**SHINING 3D**  
METROLOGY

# OptimScan Q12

High-Precision 3D Inspection Scanner



# OptimScan Q12

OptimScan Q12 is a high-precision 3D scanner with 4 × 12.3 megapixel cameras. It supports two scan ranges, allowing users to switch between them with a single click. Compared to the previous generation, OptimScan Q12 offers enhanced data acquisition capabilities, faster scanning speed, and broader material adaptability.

It also supports integration with robots, enabling customized and fully automated solutions to meet your unique requirements.



**4 × 12.3MP Cameras**



**Dual Scan Range**



**Monocular-Stereo Fusion (MSF)**



**Multiple Exposure**



**Single Shot < 1 s**

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## Reliable High Performance

OptimScan Q12, equipped with 4 x 12.3 megapixel cameras, accurately captures geometrically detailed features on an object's surface.

Combined with powerful hardware modules and advanced 3D reconstruction algorithms, it delivers an impressive accuracy of up to 0.005 mm, ensuring stable repeatability.





## Dual Scan Range, Easy to Operate

The OptimScan Q12 features two scan ranges that can be switched with a single click, eliminating manual adjustment of aperture and focal length. Scanned data from different ranges can be seamlessly fused in the software, ensuring both efficiency and detail.



Large Range  
430 x 300 mm

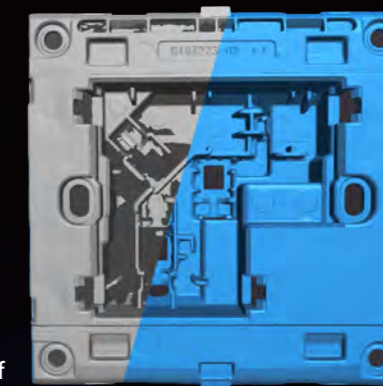
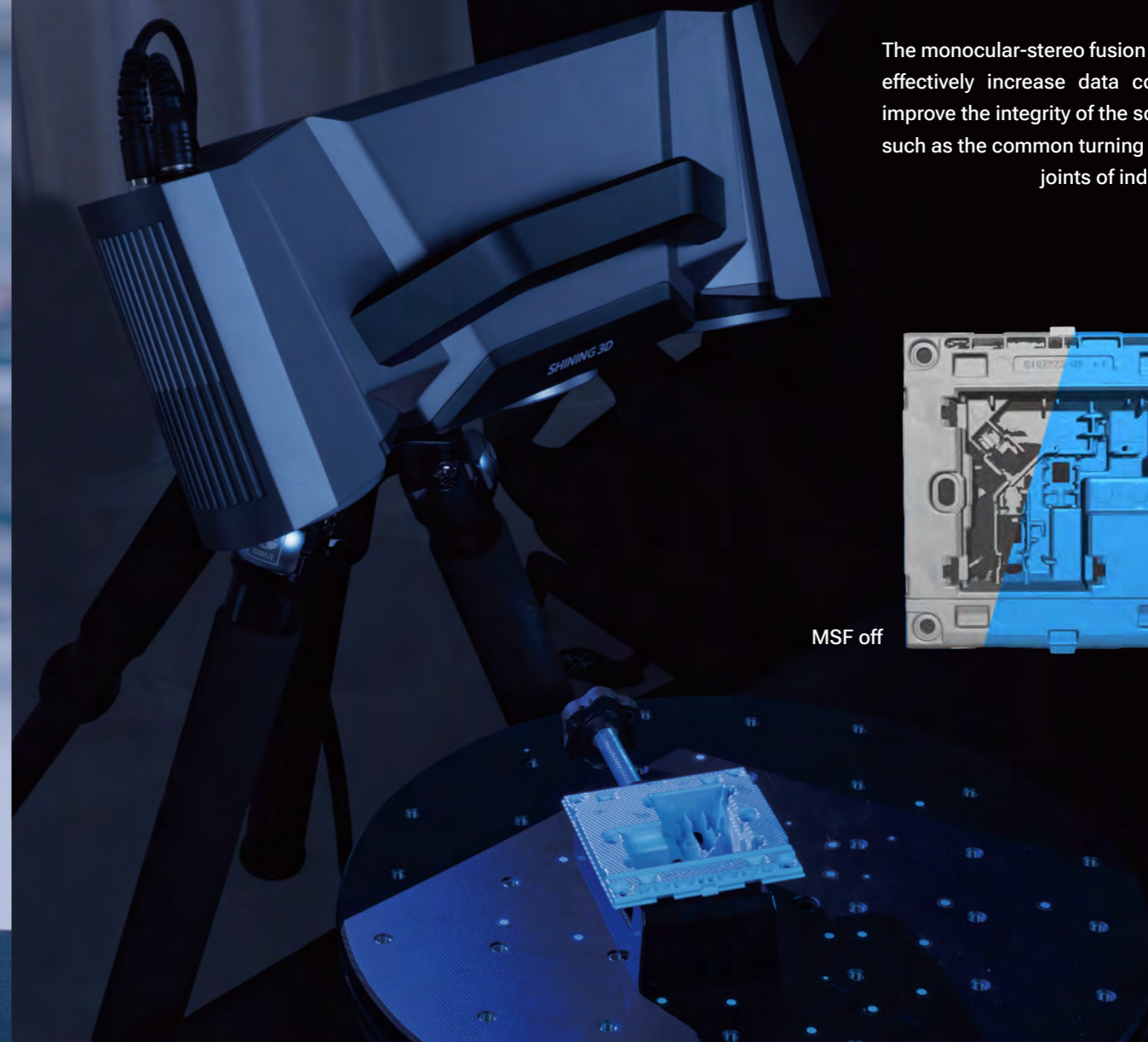


Small Range  
160 x 110 mm



## Monocular-Stereo Fusion (MSF)

The monocular-stereo fusion function can effectively increase data coverage and improve the integrity of the scanned data, such as the common turning corners and joints of industrial parts.



MSF off

MSF on



## Multiple Exposure, Faster Scanning

Powered by a built-in dual-chip computing module, OptimScan Q12 delivers fast image acquisition and data processing. Each shot less than **1 second**, capturing an impressive **12 million points** with exceptional precision. To further streamline the workflow, Q12 offers multiple exposure modes—including intelligent automatic exposure—dramatically reducing scanning time while ensuring optimal results across diverse surface conditions.



## Versatile and Highly Adaptable

OptimScan Q12 is compact and easy to carry, offering flexible manual scanning. For semi-automated operation, it pairs with a fixed tripod and an automatic turntable with up to 20 kg load, providing increased efficiency and consistency in scanning. In fully automated mode, it integrates with a robot for precise, repetitive inspection tasks.

- Manual



- Semi-automated



- Automated





## Automated Inspection Solution

OptimScan Q12 can seamlessly integrate with intelligent 3D inspection system, enabling fully automated workflow from scanning to report generation.



### Workflow



Robot Path Setup



Automated 3D Scanning



Automated Data Analysis



Automated Report Generation

# SPECIFICATIONS

OptimScan Q12		
Scan range	Large range	Small range
FOV	430 × 300 mm	160 × 110 mm
Accuracy	0.015 mm	0.005 mm
Point distance	0.1 mm	0.04 mm
Working distance	590 mm	210 mm
Depth of field	300 mm	60 mm
Resolution	4 × 12.3MP	
Light source	Blue LED	
Weight	OptimScan Q12: 3.5 kg	
Dimensions	366 × 162 × 132 mm	
Certifications	CE, FCC, ROHS, WEEE, KC, FDA, UKCA, IP50, TELEC, TiSAX	
Acceptance test	VDI/VDE 2634 Part2 (certified in ISO 17025 certified accuracy lab)	

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