SHINING 3D
METROLOGY

FreeScan Omni

Standalone Inspection-Ready Metrology 3D Scanner

Inspect on the move



FreeScan Omni

FreeScan Omni redefines handheld 3D metrology with its on-scanner inspection capability and wireless, standalone design. Featuring a PTB-certified inspection module, it enables the full inspection workflow—from high-speed scanning to real-time analysis—directly on the device.

With dual light sources for adaptable performance, FreeScan Omni delivers certified accuracy across diverse industrial applications. As a standalone solution, it streamlines operations, enhances efficiency, and ensures traceable, reliable results.

From production floor checks to metrology lab measurements and fieldwork on the go, FreeScan Omni delivers consistent performance wherever it's needed.

- **On-scanner scan-to-inspect**
- **Standalone & wireless design**
- **PTB-certified inspection module**
- **Multi-mode & high-performance**



Metrology-Grade On-Scanner Inspection

From scanning and meshing to inspection and reporting, every step is seamlessly completed right on the scanner. With preset templates and an intuitive interface, frontline staff can just scan the part and get instant, consistent reports—making quality control efficient and scalable.

Built-in PTB-certified software

Integrated with SHINING3D Inspect module, the standalone device delivers instant, high-quality, full-field inspection results.

Automated & intuitive inspection

Run inspections automatically with just one click, and navigate the process effortlessly with a user-friendly interface and visualized results, making inspections both simple and efficient.

Effortless reporting & export

View detailed inspection reports directly on the device or easily export them to a USB drive or PC in multiple formats.



Engineered for On-Site Quality Control

Certified metrology accuracy

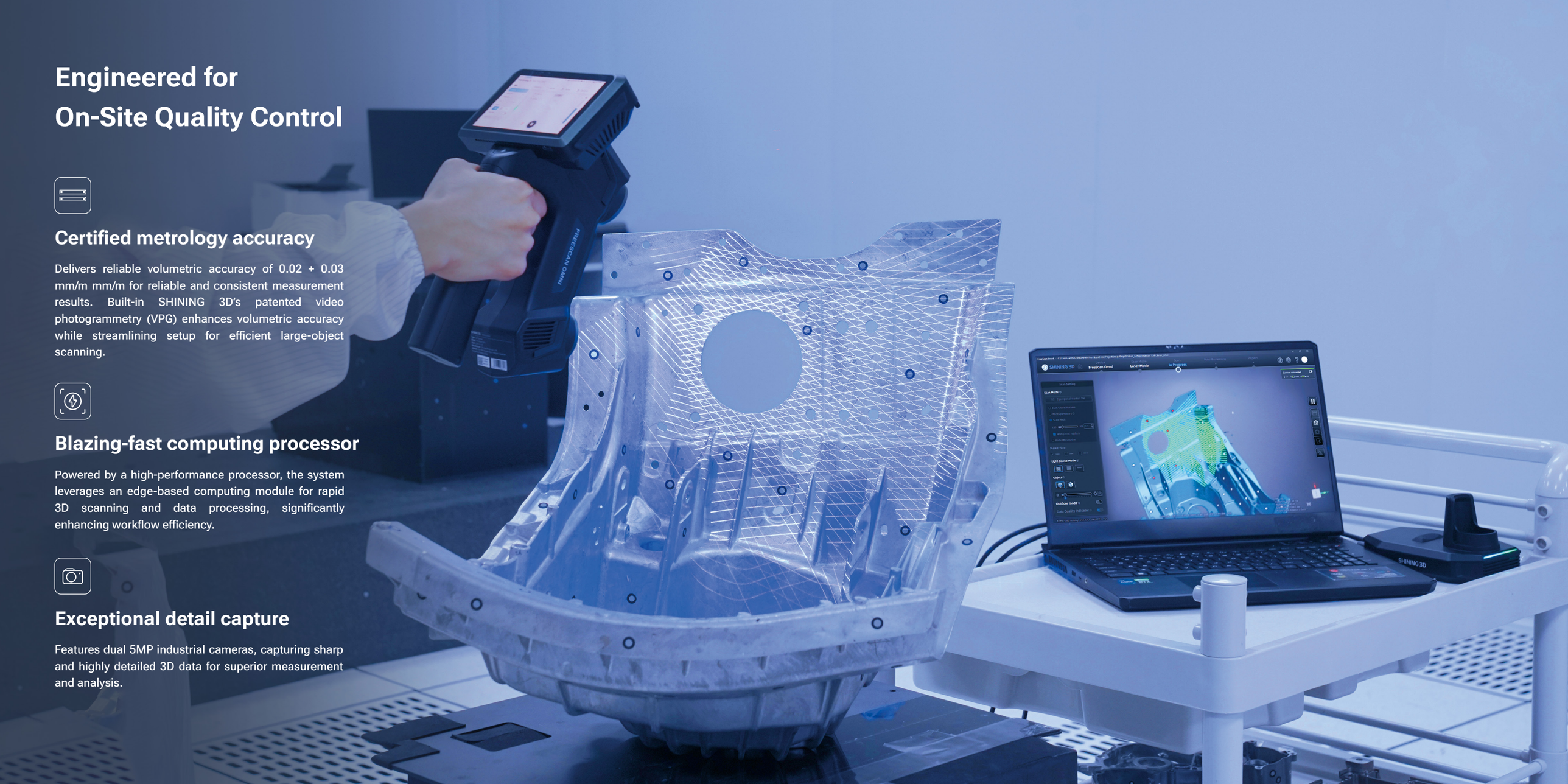
Delivers reliable volumetric accuracy of 0.02 + 0.03 mm/m mm/m for reliable and consistent measurement results. Built-in SHINING 3D's patented video photogrammetry (VPG) enhances volumetric accuracy while streamlining setup for efficient large-object scanning.

Blazing-fast computing processor

Powered by a high-performance processor, the system leverages an edge-based computing module for rapid 3D scanning and data processing, significantly enhancing workflow efficiency.

Exceptional detail capture

Features dual 5MP industrial cameras, capturing sharp and highly detailed 3D data for superior measurement and analysis.



Power Without Limits

FreeScan Omni delivers a fully wireless experience, eliminating power cords and data cables. Scanning, processing, and inspection run entirely on the device. Detachable battery packs enable seamless swaps without downtime.

The lightweight design further enhances portability, making FreeScan Omni perfectly suited for on-site measurement tasks in diverse work environments.

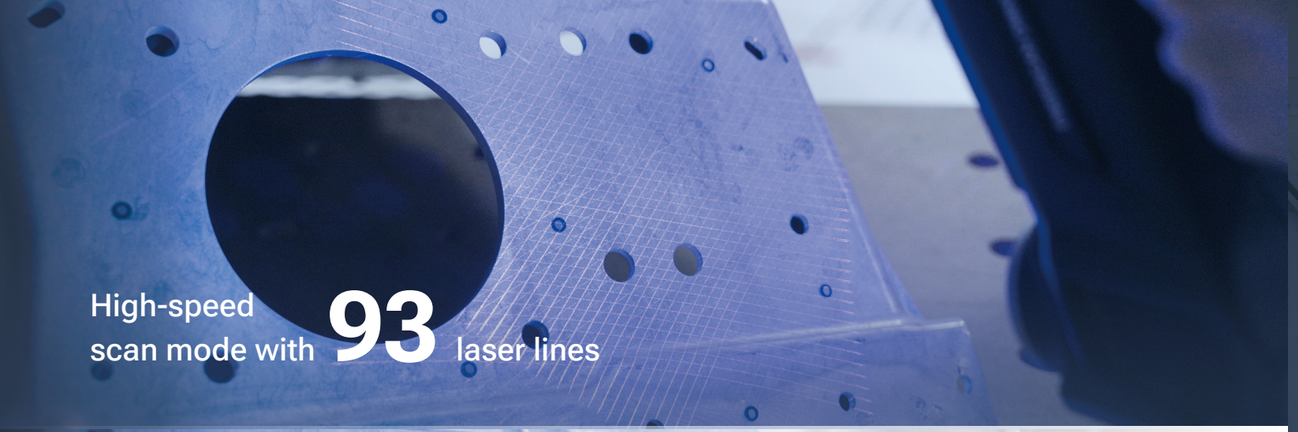


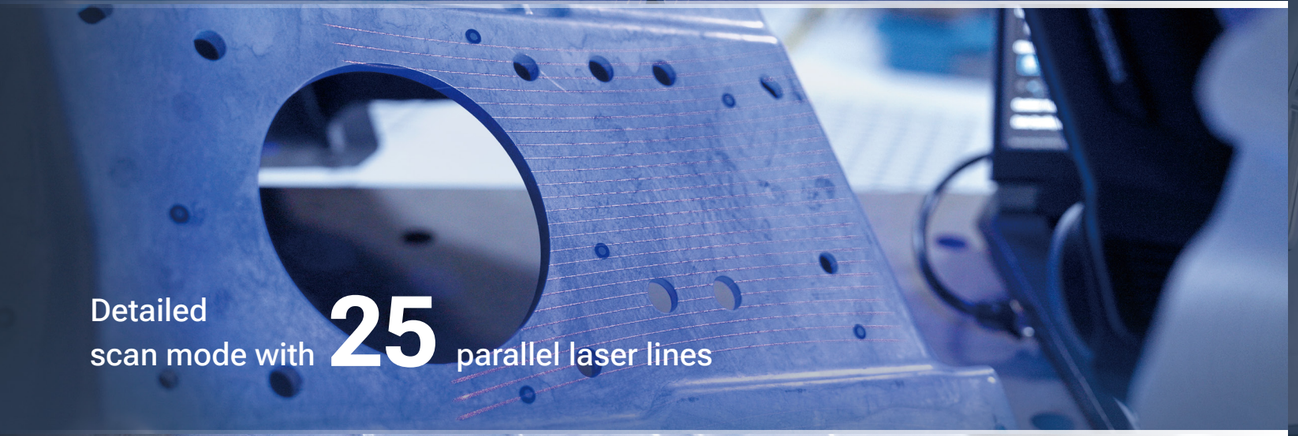
Smart Dock:
Power & Wi-Fi Set in One Step

Quick power boost — always ready to go.

Auto network setup — just dock once to connect.




High-speed
scan mode with 93 laser lines


Detailed
scan mode with 25 parallel laser lines


Deep pockets
scan mode with 1 laser line


Multiple Scanning Modes
for Industrial Usage
IR rapid scan mode for quick scans
without markers

Complete
On-Scanner Workflow

Real-time display of mesh data

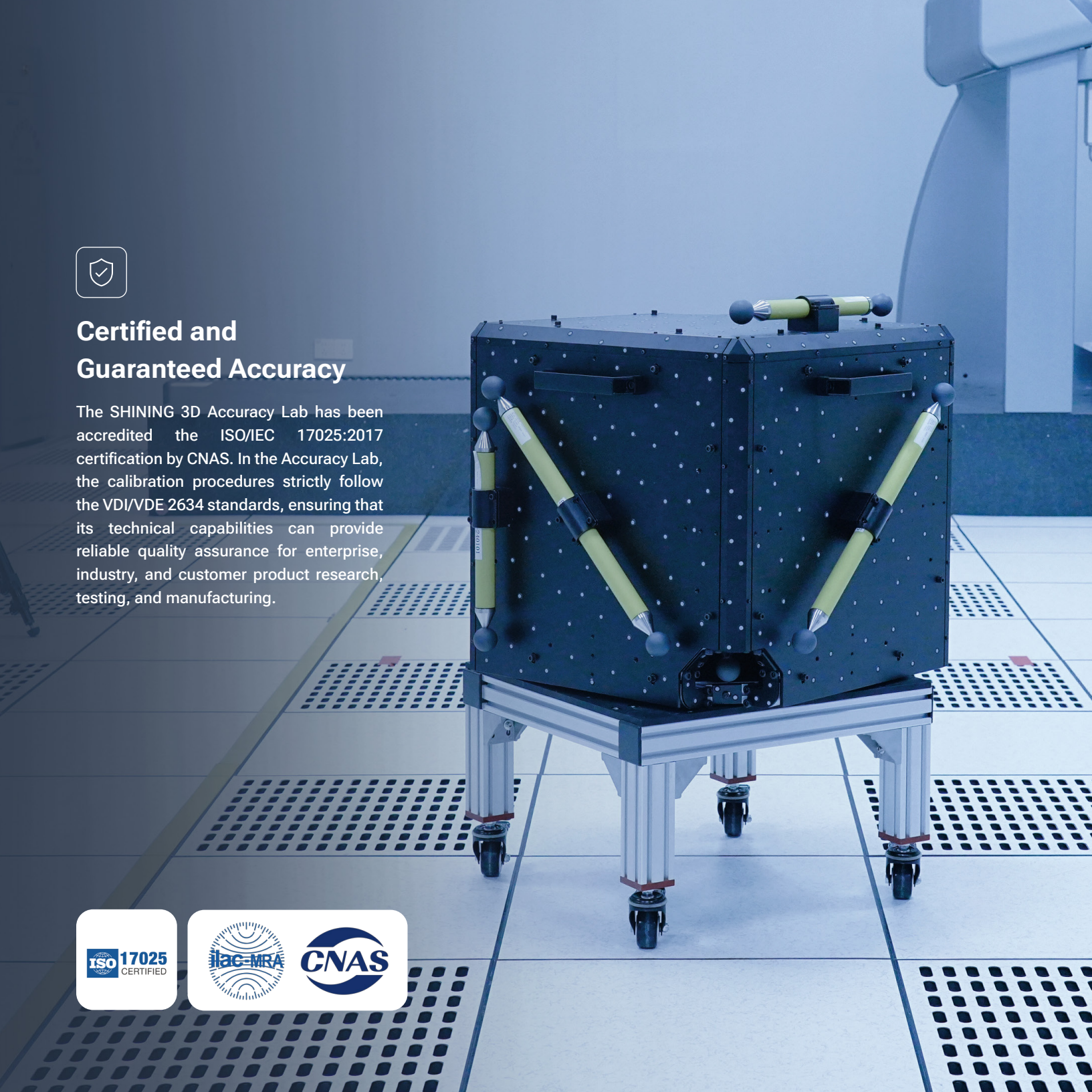
Displays mesh data in real time during the scanning process, enhancing visual quality and saving time on meshing later.

AI feature recognition

Intelligent boundary detection enables fast, accurate scanning and measurement of round and square holes, delivering high-accuracy hole data.

High-detail focus

Capture enhanced high-detail data in specific areas of the scan as needed.



Certified and Guaranteed Accuracy

The SHINING 3D Accuracy Lab has been accredited the ISO/IEC 17025:2017 certification by CNAS. In the Accuracy Lab, the calibration procedures strictly follow the VDI/VDE 2634 standards, ensuring that its technical capabilities can provide reliable quality assurance for enterprise, industry, and customer product research, testing, and manufacturing.

ISO 17025 CERTIFIED

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SPECIFICATIONS

Product	FreeScan Omni
Accuracy	0.02 mm
Volumetric accuracy with VPG	0.02 + 0.015 mm/m
Scan speed	Up to 7,619,000 points/s
Hardware	Built-in computing (32G) / FPGA / 1TB SSD
Max. FOV	Laser: 580 x 650 mm; IR: 1205 x 1104 mm
VPG	Included (no coded markers required)
Inspection module	Included (integrated on-device inspection)
High-speed scan	Included (93 laser lines) | VCSEL
Detailed scan	Included (25 parallel laser lines)
Deep pockets scan	Included (1 laser line)
Hole scanning	Intelligent hole boundary detection
Smart dock connection	Wireless & Wired mode (Fiber optic)
Certifications	CE, FCC, ROHS, WEEE, KC, FDA, UKCA, IP50,TELEC, TiSAX
Acceptance test	VDI/VDE 2634 Part3 (certified in ISO 17025 certificated accuracy lab)

SHINING 3D

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