Rev.1 TECHNOLOGIES

AUTHORIZED US RESELLER
INDUSTRIAL 3D SCANNING

SHINING 3D METROLOGY

WIRELESS STANDALONE METROLOGY 3D SCANNER

FreeScan Omni Series

Standalone Inspection-Ready Metrology 3D Scanner

INSPECT ON THE MOVE

A wireless metrology scanner that needs no laptop. Onboard computing, a built-in touchscreen and dual light sources let it scan, mesh, inspect and report on the device itself, with certified accuracy of 0.02 mm. Quality control goes to the part.



0.02 mm	7.6 M	93
ACCURACY	POINTS / SEC	LASER LINES

- On-Scanner Scan-to-Inspect
- Certified Accuracy of 0.02 mm
- Multi-Mode & High-Performance
- Scalable Platform with Modular Expansion



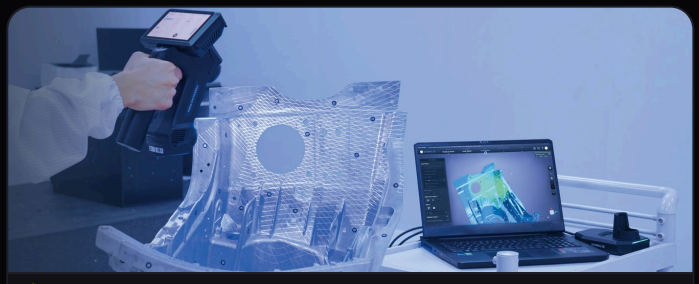
Scanning a turbofan engine on its stand in a maintenance hangar. Scanner, computer and screen are all in the operator's hand.

One Device, Scan to Report

FreeScan Omni is a wireless, standalone metrology 3D scanning platform. Onboard computing, an integrated screen and dual light sources handle scanning and data processing directly on the device, with certified accuracy of 0.02 mm. It is built as a platform: add modules later, and the investment grows with your applications.



The green overlay is the inspection result mapped onto a large casting. The operator reads it on the scanner, at the part.



Scanning an aluminum casting on a lab bench. The laptop shows the same scan, because Omni also runs in PC mode.

Metrology-Grade On-Scanner Inspection

Built-in PTB-certified software. SHINING3D Inspect runs on the scanner, with one-click inspection from preset templates.

Reports on the device. View them on screen or export to a USB drive or PC.

Engineered for On-Site Quality Control

Certified volumetric accuracy. 0.02 + 0.03 mm/m, improved further by patented VPG on large parts.

Fast and detailed. Edge computing processes data on board, and dual 5 MP cameras capture fine detail.



The Omni in its Smart Dock. One dock charges the scanner and connects it to your Wi-Fi network.



IR rapid scan in an aircraft cabin. Seats and floor are captured quickly with no markers on them.

Power Without Limits

No power cord and no data cable. Scanning, processing and inspection all run on the device, and detachable battery packs swap without downtime.

Smart Dock. A quick power boost keeps the scanner ready, and docking once sets up Wi-Fi automatically.

Multiple Scanning Modes

Up to 7,619,000 points per second. Blue laser modes cover speed, fine detail and deep pockets, and IR rapid scan handles quick scans without markers.

93 laser lines high-speed scan	**25** parallel lines detailed scan	**1** laser line deep pockets



The live scan on the Omni's own screen, in front of the part being measured. Gaps show up before the operator walks away.

FreeScan Omni

The flagship configuration. On-device inspection, video photogrammetry (VPG), AI feature recognition and the SHINING3D Inspect module for PC are all included.

FreeScan Omni Lite

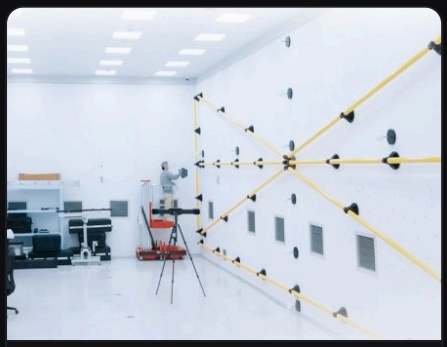
The same hardware, certified accuracy and scanning modes, in PC or standalone mode. Inspection, VPG and AI feature recognition are optional modules you add as needs grow.

What the modules do

VPG keeps volumetric accuracy consistent on large objects without coded markers. AI feature recognition finds round holes, rectangular holes and slots and measures them fast.

Certified Accuracy: ISO/IEC 17025 Laboratory

Accuracy claims on this page are not marketing numbers. The SHINING 3D Accuracy Lab is accredited to ISO/IEC 17025 by CNAS, and its calibration procedures follow VDI/VDE 2634 and ISO 10360. Every FreeScan Omni is acceptance tested there to VDI/VDE 2634 Part 3 and ISO 10360. That is the document your quality manager, and your customer's auditor, will ask to see.



Large-volume hall: reference scale bars set the traceable length standard for volumetric accuracy tests.



Long-range rail: depth-of-field and working-distance performance verified along a calibrated track.



Calibration benches: instruments are verified to VDI/VDE 2634 and ISO 10360 before a certificate is issued.

Proven Across Industries

Where the Omni earns its keep: parts that are too big, too far from the lab or too busy to wait for a CMM.



Aerospace MRO: an engine fan checked in the hangar, result on the scanner screen.



Metrology room: a large casting scanned with the laptop showing the color map.



Mold and tooling: a large mold part measured where it sits on the floor.



Machined parts: blue laser lines capture holes and edges in fine detail.

Specifications

Specification	FreeScan Omni	FreeScan Omni Lite
Accuracy	0.02 mm (0.0008 in)	
Volumetric accuracy	0.02 + 0.03 mm/m	
Volumetric accuracy with VPG	0.02 + 0.015 mm/m (0.0008 in + 0.00018 in/ft)	With optional VPG module
Scan speed	Up to 7,619,000 points/s	
Hardware	Built-in computing (32G) / FPGA / 1TB SSD	
Resolution	0.01 – 10 mm	
Depth of field	830 mm (170 – 1000 mm)	
Max. FOV	Laser: 580 × 650 mm (22.8 × 25.6 in) IR: 1205 × 1104 mm (47.4 × 43.5 in)	
High-speed scan	Included (93 laser lines) | VCSEL	
Detailed scan	Included (25 parallel laser lines)	
Deep pockets scan	Included (1 laser line)	
Work modes	PC and standalone mode	
VPG	Supported (no coded markers required)	Optional module
Inspection module	Supported (integrated on-device inspection)	Optional module
SHINING3D Inspect module for PC	Included	Optional module
Hole scanning	Supported (intelligent hole boundary detection)	Optional module (AI feature recognition)
Laser class	Class II (eye safe)	
Working distance	200 – 680 mm	
Smart dock connection	Wireless & wired mode (fiber optic)	
Net weight	≤ 1.1 kg	
Output format	.stl, .asc, .3mf, .p3	
Working temperature	-10 – 40 °C (14 – 104 °F)	
Working humidity	10 – 90%	
Certifications	CE, FCC, RoHS, WEEE, KC, FDA, UKCA, IP50, TELEC, TiSAX	
Acceptance test	VDI/VDE 2634 Part 3 & ISO 10360 certified (tested in the ISO/IEC 17025 accredited accuracy lab)	

Shared rows apply to the whole series: Omni Lite uses the same hardware as Omni. Volumetric accuracy without VPG per shining3d.com.

VDI/VDE 2634 PART 3 · ISO 10360 · ISO/IEC 17025 ACCREDITED LAB · PTB-CERTIFIED SOFTWARE · IP50

See it on your parts.

Book a live demo or a free sample scan. US-based metrology team, fast turnaround.

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FreeScan™ Omni and FreeScan Omni Lite are products of SHINING 3D. Rev1 Technologies is an authorized United States reseller. Acceptance testing is performed in SHINING 3D's ISO/IEC 17025 accredited lab. Specifications provided by the manufacturer and subject to change without notice.

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