HYBRID LIGHT SOURCE METROLOGY 3D SCANNER

FreeScan Combo Series

Hybrid Light Source and Multifunctional Handheld 3D Scanner

COMPACT AND POWERFUL METROLOGY

Blue laser and infrared VCSEL light in one 620 g scanner that measures just 193 × 63 × 53 mm. Laser modes reach 0.02 mm accuracy for metrology work, and infrared mode scans feature-rich parts fast without markers. Choose FreeScan Combo with 26 laser lines or Combo+ with 50.



0.02 mm	3.6 M	620 g
ACCURACY	POINTS / SEC (COMBO+)	WEIGHT

- Metrology-Grade Accuracy
- Versatile Dual Light Scanning
- Multiple Scanning Modes
- Lightweight and Compact



Scanning the flank of a sports car in the workshop. Blue laser lines wrap the curved panel while the operator stays close to the part.

Compact and Powerful Metrology

The FreeScan Combo Series packs two light sources, blue laser and infrared VCSEL, into an ultra-compact shell. One scanner covers inspection, reverse engineering, product design and additive manufacturing.

Two models. FreeScan Combo projects 26 laser lines. FreeScan Combo+ projects 50 and scans at up to 3,600,000 points per second.



Multiple-line mode: a field of blue laser lines covers a textured part in one pass.

Four Scanning Modes

Multiple-line. 26 (Combo) or 50 (Combo+) laser lines for overall scans.

Fine. 7 parallel laser lines for intricate details.

Deep hole. 1 single laser line for holes and pockets.

Infrared. Quick scans without markers.



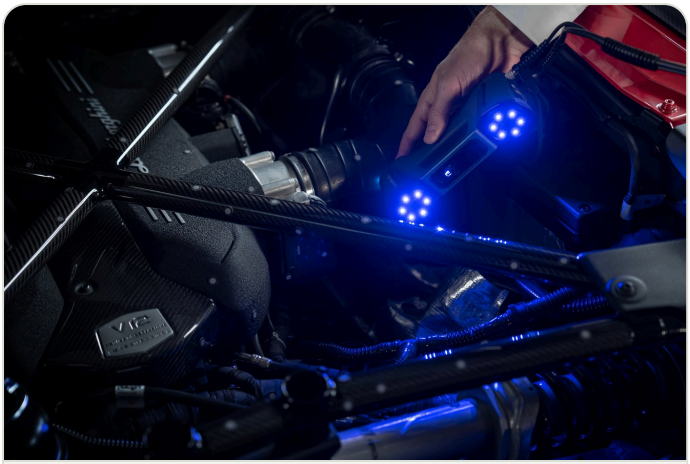
Scanning at a wheel and brake caliper, where dark rubber and glossy paint sit side by side.

Blue Laser and Infrared Light

Combining blue laser and infrared light gives accurate results across very different jobs, with both speed and quality.

Blue laser. Tackles dark or reflective surfaces with confidence.

Infrared. Covers feature-rich parts fast, with no markers.



Working inside a crowded engine bay. The compact body and camera angle reach between hoses and brackets.

Powerful and Ergonomic

Compact, light and ergonomic. The optimized camera angle suits narrow, complex spaces and captures data fast in seams.

620 g, 193 × 63 × 53 mm. Easy to hold through a long scan.

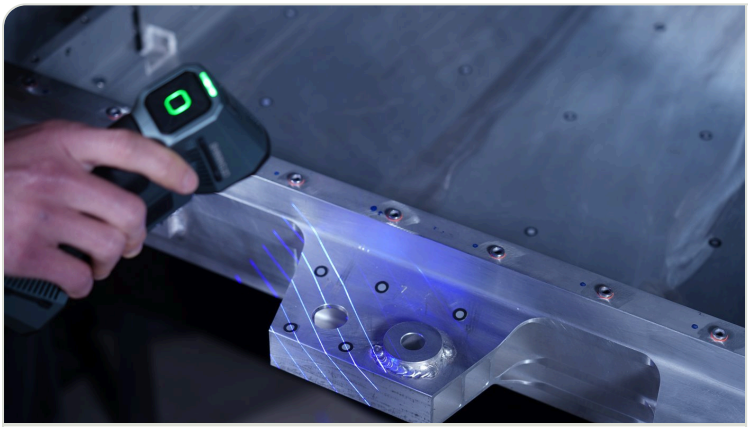


Multiple-line mode sweeping an engine block. Wide coverage per pass keeps scan times short.

Fast Scan Speed

Multiple-line mode projects up to 50 laser lines on FreeScan Combo+ and scans at up to 3,600,000 points per second.

50 laser lines Combo+	**26** laser lines Combo



Laser mode on a machined aluminum battery tray, the kind of part where tight tolerances matter.

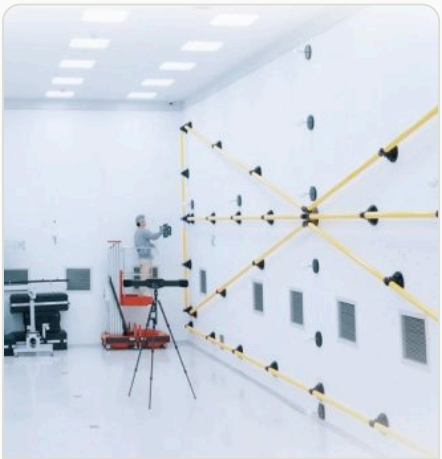
A Wise Choice for Metrology

The laser scanning modes reach industrial-grade accuracy of up to 0.02 mm, ideal for metrology.

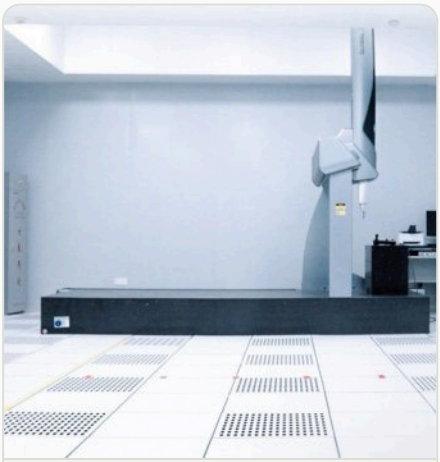
Volumetric accuracy. 0.02 + 0.033 mm/m in laser mode, based on VDI/VDE 2634 Part 3.

Certified Accuracy: ISO/IEC 17025 Laboratory

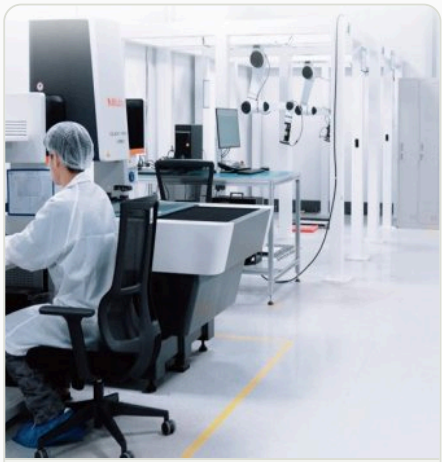
Accuracy claims on this page are not marketing numbers. The SHINING 3D Accuracy Lab is accredited to ISO/IEC 17025 by CNAS, and its calibration procedures follow VDI/VDE 2634 and ISO 10360. The FreeScan Combo Series is acceptance tested there to VDI/VDE 2634 Part 3 and ISO 10360. That is the document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



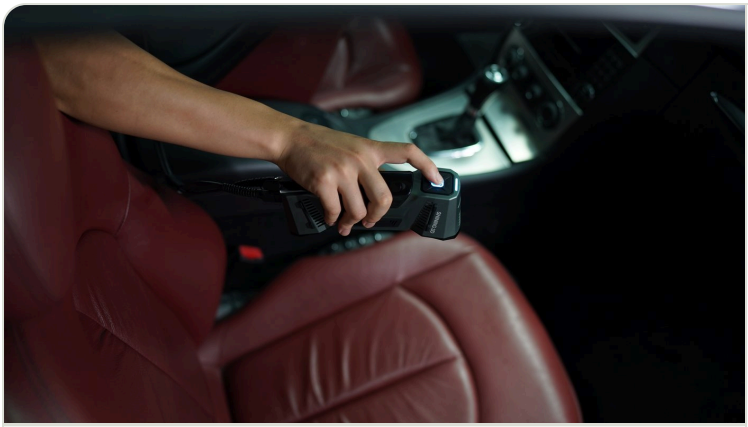
Large-volume hall: reference scale bars set the traceable length standard for volumetric accuracy tests.



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.



Infrared mode on a leather car seat. Nothing gets stuck to the upholstery.

Infrared Light Scanning

For feature-rich workpieces, infrared mode captures parts quickly and efficiently without markers.

Infrared mode. Up to 2,250,000 points per second over a 600 × 600 mm field of view.

Proven Across Industries

Where the Combo Series is already working: from body panels to battery trays, inside the car and out.



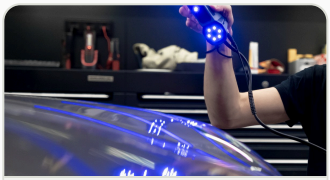
E-mobility: a large EV battery tray measured on the shop floor.



Automotive aftermarket: brackets and mounts captured under the hood.



Brake components: a disc with reference markers scanned on the bench.



Body panels: glossy painted surfaces scanned in the garage.

Specifications

Specification	Laser · FreeScan Combo+	Laser · FreeScan Combo	Infrared
Light source	50 laser lines 7 parallel laser lines 1 single laser line	26 laser lines 7 parallel laser lines 1 single laser line	VCSEL
Scan speed	3,600,000 points/s	1,860,000 points/s	2,250,000 points/s
Working distance	300 mm / 200 mm		300 mm
Scan accuracy	Up to 0.02 mm		Up to 0.05 mm
Volumetric accuracy (1)	0.02 + 0.033 mm/m		0.05 + 0.1 mm/m
Scan depth	360 mm		1240 mm (2)
Max. FOV	520 × 510 mm		600 × 600 mm
Point distance	0.05 – 10 mm		0.1 – 3 mm
Laser class	Class II (eye-safe)		
Connectivity	USB 3.0		
Dimensions	193 × 63 × 53 mm		
Weight	620 g		
Power input	12 V, 5.0 A		
Operating temperature	-20 – 40 °C		
Operating humidity	10 – 90%		
Certifications	CE, FCC, RoHS, WEEE, KC, FDA, UKCA, IP50, TiSAX		
Accuracy certification	VDI/VDE 2634 Part 3, ISO 10360 (certified in the ISO/IEC 17025 accredited accuracy lab)		
Recommended PC	Windows 10/11 Pro (64-bit) · Intel Core i7-13650HX or above · RTX 4060 or above · 8GB VRAM · 64GB DDR5 RAM		

(1) Based on VDI/VDE 2634 Part 3: sphere-spacing error assessed with traceable length artefacts and markers at different locations and orientations in the working volume. (2) Scan depth can be adjusted manually in infrared mode; the maximum is 1240 mm.

VDI/VDE 2634 PART 3 · ISO 10360 · ISO/IEC 17025 ACCREDITED LAB · 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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Rev.1 TECHNOLOGIES