SHINING 3D METROLOGY

V-GER METROLOGY

FreeScan Trak ProW+

Wireless 3D Dynamic Tracking & Scanning System with Expanded Range

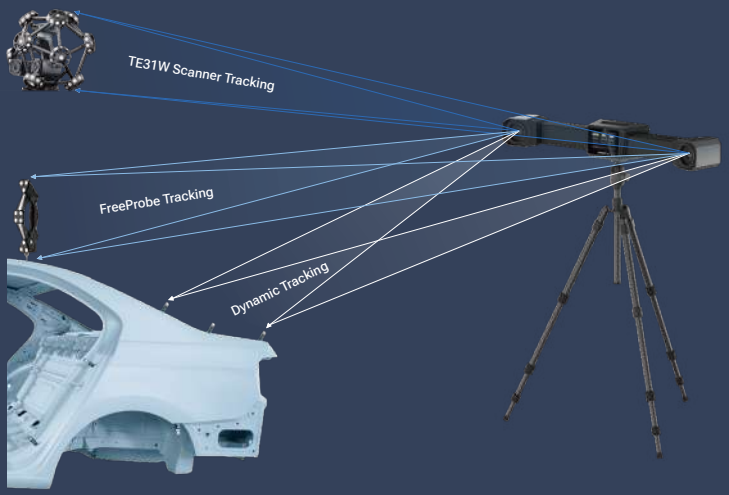
Track Smarter, Expand Further



FreeScan Trak ProW+

FreeScan Trak ProW+ is a wireless large-scale 3D dynamic tracking system designed for efficient single-station measurement of large workpieces. Featuring an innovative embedded edge computing module, it enables fully wireless operation for greater freedom and efficiency.

It retains the core advantages of the FreeScan Trak Pro series, including marker-free scanning, high accuracy, stable repeatability, and fast data acquisition. With an single-station tracking range of up to 156 m³, it reduces leapfrog time while ensuring efficient and reliable measurement for large-scale inspection.







Ultra-Wide Measuring Range

FreeScan Trak ProW+ features a groundbreaking design with an ultra-long 8.6 m tracking distance and widely expands the single-station tracking volume to 156 m³, significantly reducing the need for leapfrog* during large-scale object scanning.



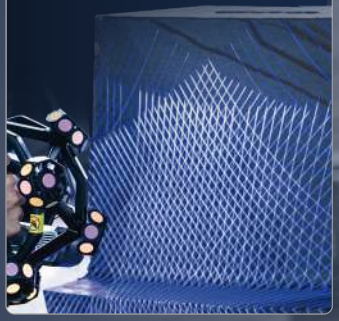
*(1) Leapfrog: Refers to the technique of relocating the measuring device to extend its working volume. This involves measuring reference geometries (artifacts) in one position, then repositioning the device and measuring the same reference geometries again. These reference points establish a link between the new device position and the original coordinate system, allowing measurements to be consistently reported in the same reference frame.

60 m3
100 m3
156 m3
5m
6m
7.2m
8.6m

No Markers Needed
Fast Paced Scanning

The tracker enables real-time scanner recognition and positioning, eliminating the need for reference markers, which enhances scanning efficiency and streamlines the workflow, while ensuring rapid data acquisition with a scanning speed of up to 7,600,000 points per second.

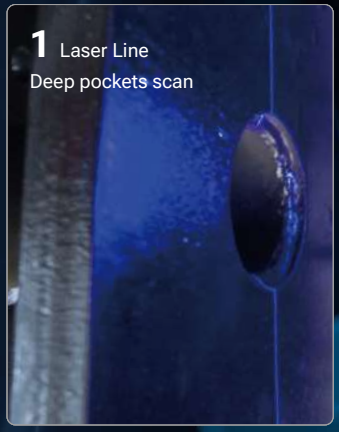
93 Crossed Laser Lines
High-speed scan

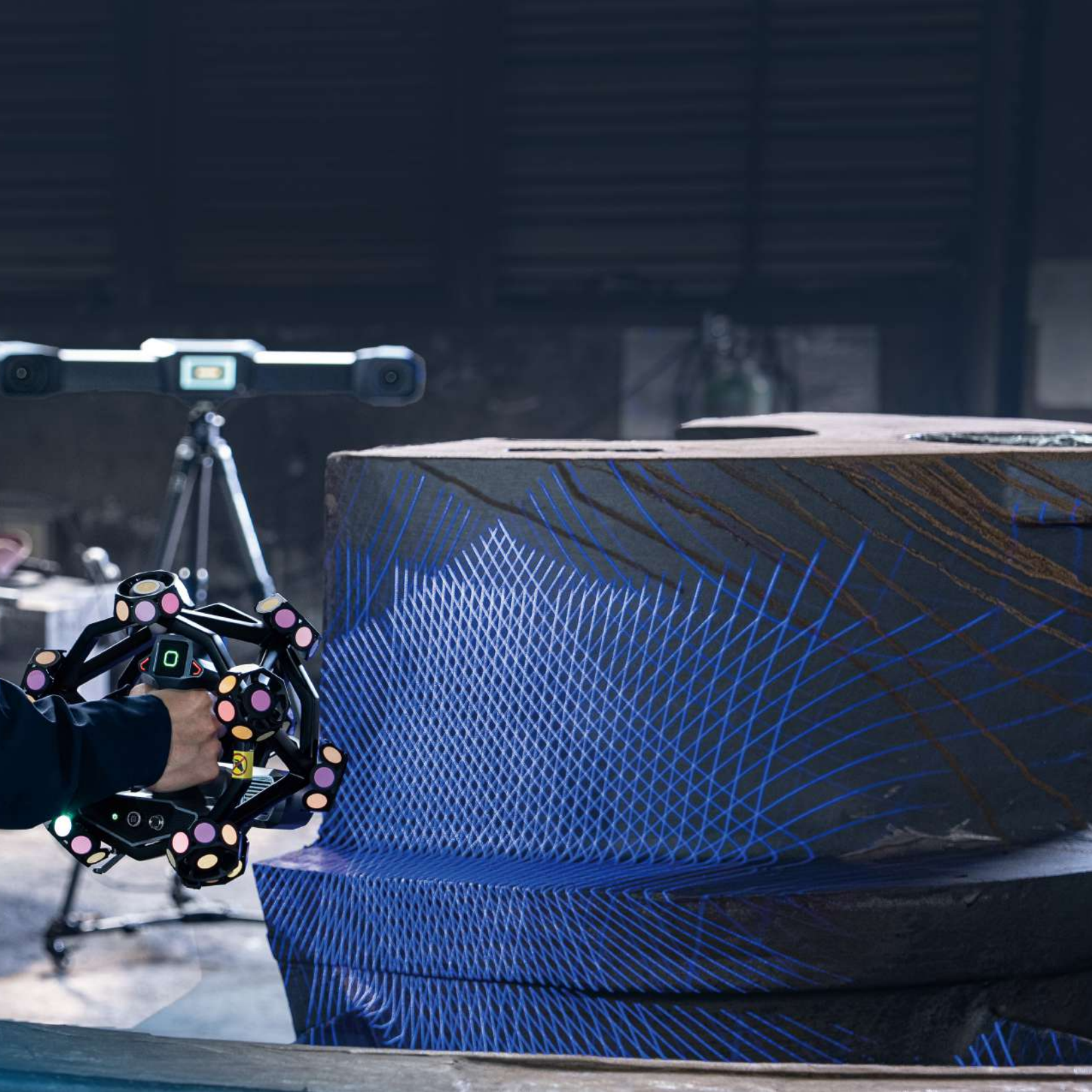


25 Parallel Laser Lines
Detailed scan



1 Laser Line
Deep pockets scan





Wireless Scanning Wherever You Go

Featuring integrated computing and wireless modules, FreeScan Trak ProW+ delivers a truly cable-free scanning experience with real-time data processing and stable wireless transmission. An intuitive built-in display provides instant access to key device information, ensuring efficient, reliable, and seamless scanning wherever the job takes you.



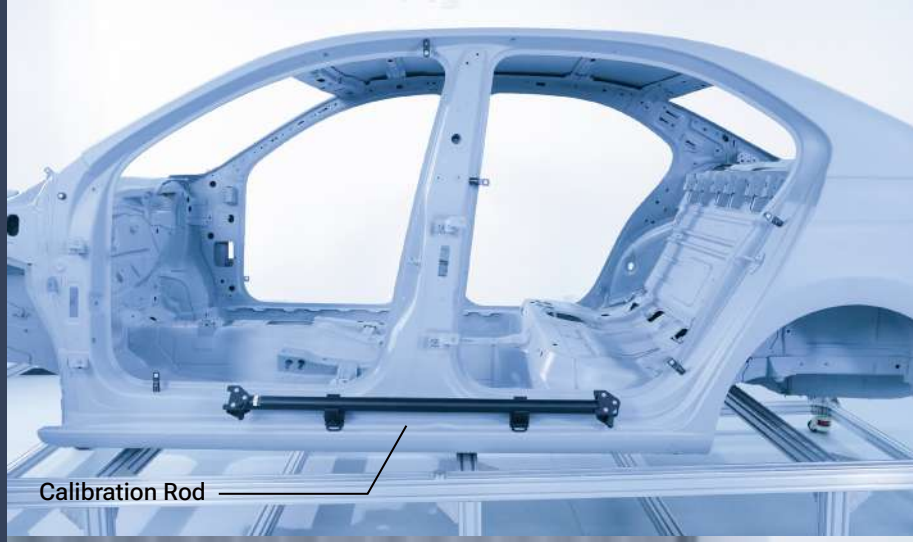


Video Photogrammetry (VPG)

FreeScan Trak ProW+ features SHINING 3D's patented video-based photogrammetry, which eliminates the need for coded markers.

By integrating photogrammetry technology with a calibration rod, it enables real-time marker verification through video capture.

This ensures consistent volumetric accuracy and streamlines the setup process for efficient large-object scanning.



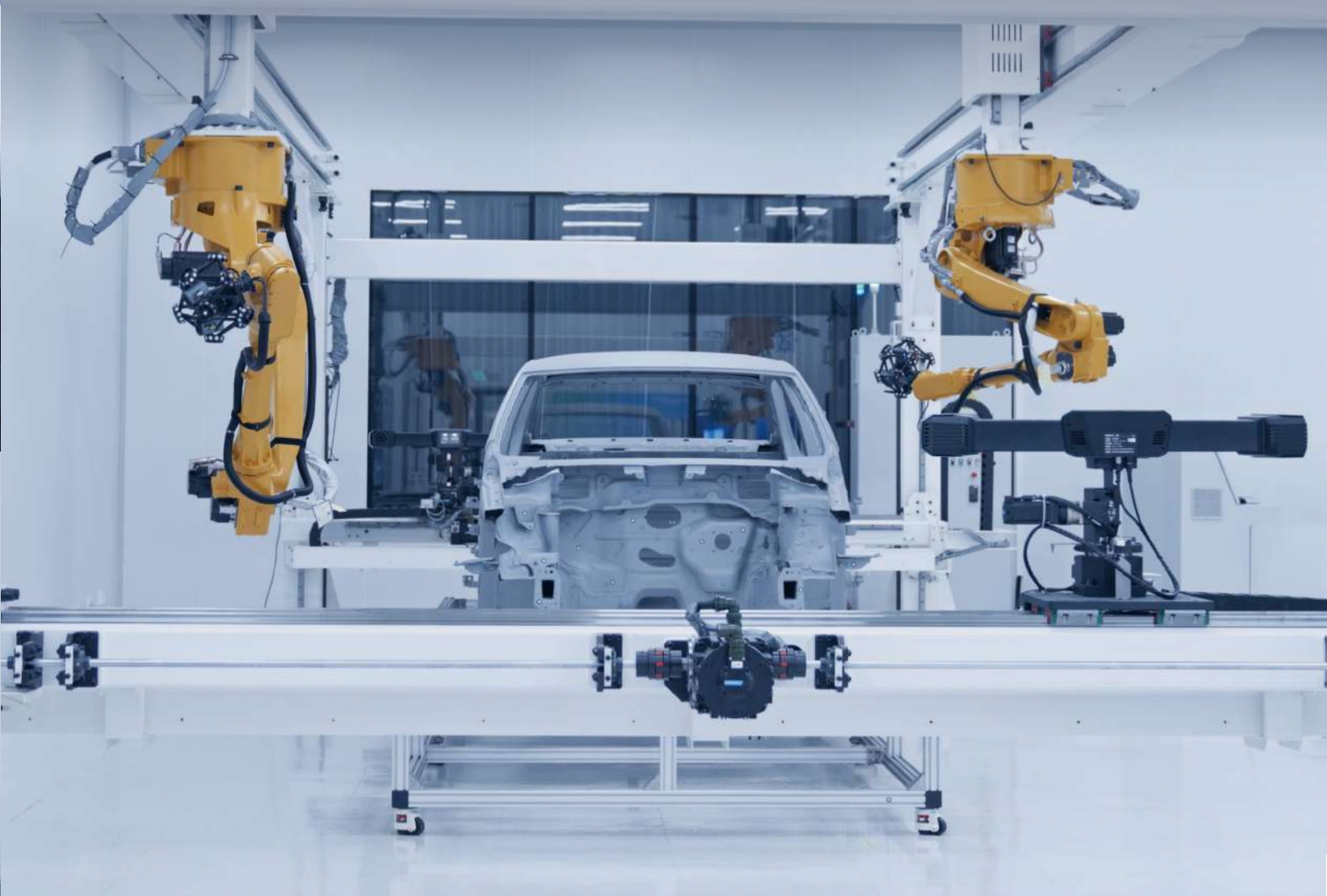




Customized Measurement Solutions

SHINING 3D offers flexible, customized solutions to accommodate diverse scanning needs. For instance, it supports a collaborative solution with multiple systems, significantly expanding the scanning range and easily meeting the scanning demands of extremely large objects.

By working together, multiple devices can cover a broader area, enabling efficient, flexible and accurate full-field scanning.



SHINING3D Inspect

SHINING3D Inspect delivers a streamlined, modular, and customizable approach to 3D inspection, simplifying workflows from data acquisition to reporting. The software is suitable for dimensional inspection and quality control of components across industries.

- PTB-certified capability
- Streamlined inspection workflow
- Industry-specific modules
- Customizable, clear reports

Get Your Free Trial

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SHINING 3D



FreeProbe Series (Optional)

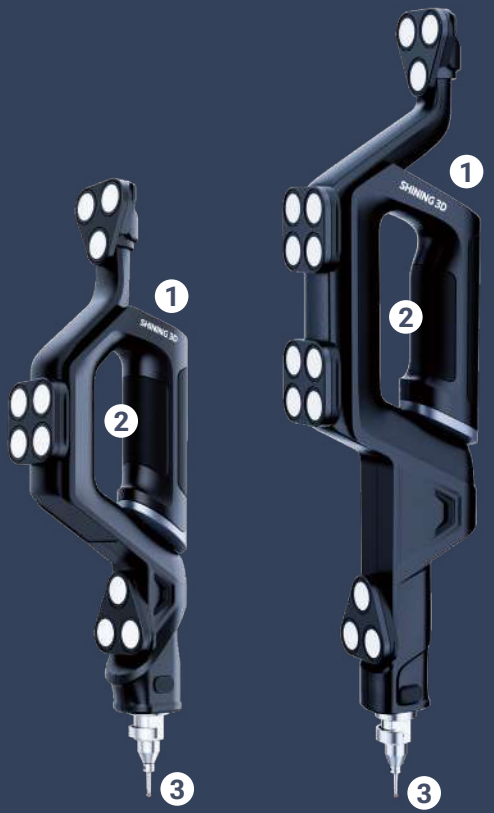
FreeProbe line-up, combined with the FreeScan Trak ProW+, forming a powerful portable probing solution designed for precise, shop-floor measurements.

With dynamic tracking and wireless operation design, the system enables free movement of the part, probe, and tracker during measurement and enhances the measurement capabilities for hard-to-reach or non-scannable features.

- Wireless & Portable
- Various Probe Tips
- Deeper Probing Capability
- Quick Start with Fast Pairing
- Ergonomic Design
- Seamless Inspection Software Integration











1. **Multi-Function Buttons**
2. **Easy Grip**
3. **Multiple Tip Options**

CNAS-Accredited Accuracy Lab

This expansive, CNAS-accredited facility is staffed by expert metrologists and certified to perform a comprehensive range of advanced calibration and testing projects. By rigorously adhering to the strictest international standards (like VDI/VDE and ISO), we ensure every 3D scanner, from R&D to production, is verified for world-class, metrology-grade accuracy.









Trak Pro Series Case Studies



Inspection and Quality Control of Carbon Fiber Monocoque for Hypercars with FreeScan Trak Pro2



SHINING 3D Enables Long-Range Voyages for New-Energy Sailboats with High-Accuracy 3D Scanning



SHINING 3D's Diverse Scanning Solutions Empower Smarter Quality Control at Dawn Precision



High-Accuracy 3D Scanning for Traceable Quality Inspection

Trak Pro Series Case Studies



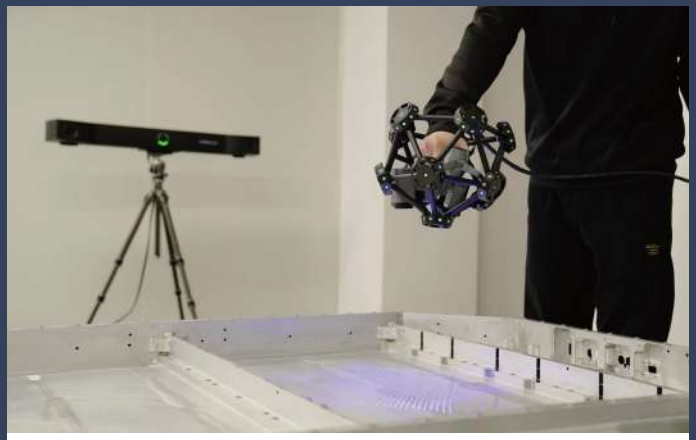
Juliá Automobile x SHINING 3D: When Passion Meets 3D Scanning Technology, Classic Porsche Reborn



How Pine-Pacific Cut 3D Inspection Time by 60% with Wireless 3D Scanning



3D Scanning Automotive Body in White (BIW) with FreeScan Trak Pro2



How the FreeScan Trak Pro2 Accelerates EV Battery Tray Inspection

SPECIFICATIONS

	FreeScan Trak ProW+	FreeProbe Series (Optional)
Accuracy	0.023 mm (0.00091 in)	0.025 mm (0.00098 in)
Volumetric accuracy (based on measuring range)	12 m³ (423.78 ft³) @ 3.5 m (11.48 ft): 0.046 mm (0.00181 in) 36 m³ (1,271.33 ft³) @ 5 m (16.4 ft): 0.063 mm (0.00248 in) 60 m³ (2,118.88 ft³) @ 6 m (19.69 ft): 0.088 mm (0.00346 in) 100 m³ (3,531.47 ft³) @ 7.2 m (23.62 ft): 0.125 mm (0.00492 in) 156 m³ (5,509.09 ft³) @ 8.6 m (28.22 ft): 0.156 mm (0.00614 in)	
Volumetric accuracy with VPG	0.044 mm + 0.012 mm/m (0.00173 + 0.00047 in/ft)	
Scan speed	7,600,000 points/s	100 measurements/s
Resolution	0.01 ~ 10 mm (0.00039 ~ 0.39 in)	/
Max. FOV	800 x 700 mm (31.5 × 27.6 in)	/
VPG	Included (no coded markers required)	/
High-speed scan	Included (93 laser lines)	/
Detailed scan	Included (25 parallel laser lines)	/
Deep pockets scan	Included (1 laser line)	/
Working distance	300 mm (11.81 in)	/
Depth of field	400 mm (15.75 in)	/
Connection	Wireless & Wired mode	
Output formats	stl, obj, ply, asc, 3MF, P3	
Working temperature	-10 ~ 40°C (14 ~ 104 °F)	
Working humidity	10% ~ 90% RH	
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)	ISO 10360 certified (Tested in ISO/IEC 17025 accredited accuracy lab)
Recommended computer configuration	OS: Windows 10 Pro (64-bit) / Windows 11 Pro (64-bit) Processor: Intel Core i7 or i9 (13th/14th Gen HX) or above; Intel Core Ultra 9 285HX or above Graphics card: NVIDIA GeForce RTX 5080 Laptop GPU or above VRAM: 16G or above; RAM: 64G or above	

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	FreeScan Trak ProW	FreeProbe Series (Optional)
Accuracy	0.023 mm (0.00091 in)	0.025 mm (0.00098 in)
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Volumetric accuracy with VPG	0.044 mm + 0.012 mm/m (0.00173 + 0.00047 in/ft)	
Scan speed	5,500,000 points/s	100 measurements/s
Resolution	0.01 ~ 10 mm (0.00039 ~ 0.39 in)	/
Max. FOV	800 x 700 mm (31.5 × 27.6 in)	/
VPG	Included (no coded markers required)	/
High-speed scan	Included (50 laser lines)	/
Detailed scan	Included (7 parallel laser lines)	/
Deep pockets scan	Included (1 laser line)	/
Working distance	300 mm (11.81 in)	/
Depth of field	400 mm (15.75 in)	/
Connection	Wireless & Wired mode	
Output formats	stl, obj, ply, asc, 3MF, P3	
Working temperature	-10 ~ 40°C (14 ~ 104 °F)	
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Acceptance test	VDI/VDE 2634 Part 3 & ISO 10360 certified (Tested in the ISO/IEC 17025 accredited accuracy lab)	ISO 10360 certified (Tested in ISO/IEC 17025 accredited accuracy lab)
Recommended computer configuration	Computer memory: 64GB or above, DDR5 dual channel; Graphics card NVIDIA RTX 4060 Laptop GPU or above Video memory: 8GB or above; processor: 13th Gen® Intel Core™ i7-13700H or above; Resolution: 1920*1080,100% or 125%	

V-GER
COMPETENCE IN 3D SCANNING

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