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TRACKSCAN SHARP

Optical 3D Scanning System

Large-volume and Precise Measurement Beyond Limits



SCANTECH (HANGZHOU) CO., LTD.

TRACKSCAN SHARP

TrackScan Sharp series optical 3D scanning system, engineered with 25-megapixel industrial cameras and robust onboard processors for edge computing, is specially designed for measuring large-scale parts over a long distance with high speed. It brings optical measurements to new heights by offering a tracking distance of up to 8.5 meters, a volumetric range of 135 m^3, enabling powerful measurement experiences.

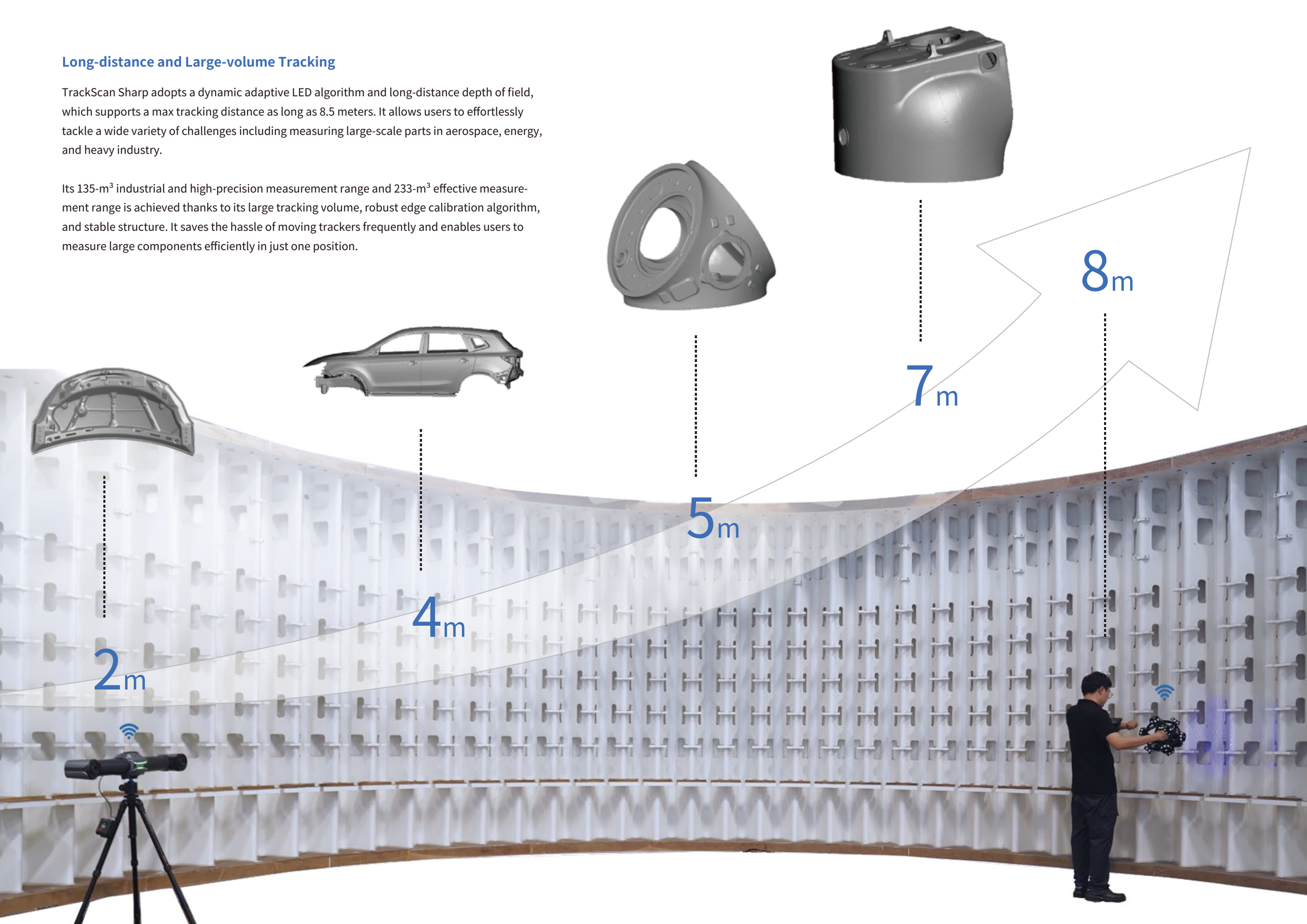
This measurement system is highlighted by its robust performance including 99 laser lines, and a measurement rate of up to 4.86 million measurements/s, offering highly precise and reliable measurement results.

Moreover, as the third generation of Scantech's technology featured by intelligent and wireless 3D scanning, TrackScan Sharp is fully battery-powered with wireless data transfer, which frees the user from cable constraints and allows for smooth scanning in any environment.

Long-distance and Large-volume Tracking

TrackScan Sharp adopts a dynamic adaptive LED algorithm and long-distance depth of field, which supports a max tracking distance as long as 8.5 meters. It allows users to effortlessly tackle a wide variety of challenges including measuring large-scale parts in aerospace, energy, and heavy industry.

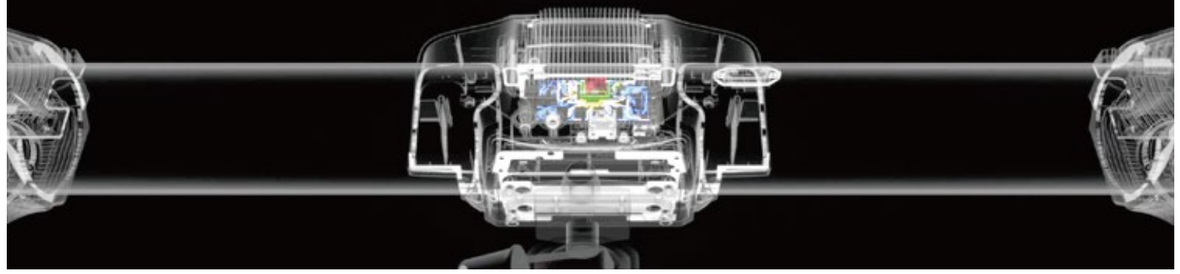
Its 135-m^3 industrial and high-precision measurement range and 233-m^3 effective measurement range is achieved thanks to its large tracking volume, robust edge calibration algorithm, and stable structure. It saves the hassle of moving trackers frequently and enables users to measure large components efficiently in just one position.



Wireless and Easy 3D Scanning

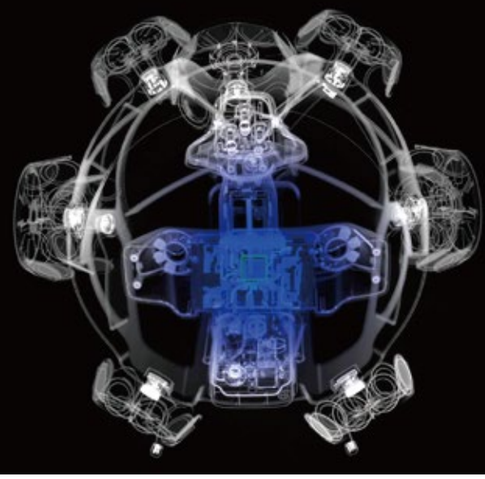
Wireless System

Both the system's 3D scanner and optical tracker have powerful onboard processors for edge computing, which process images and data in real time and output 3D coordinates. Combined with batteries, and external network cards, it lets users to measure objects wirelessly.



Plug-and-play

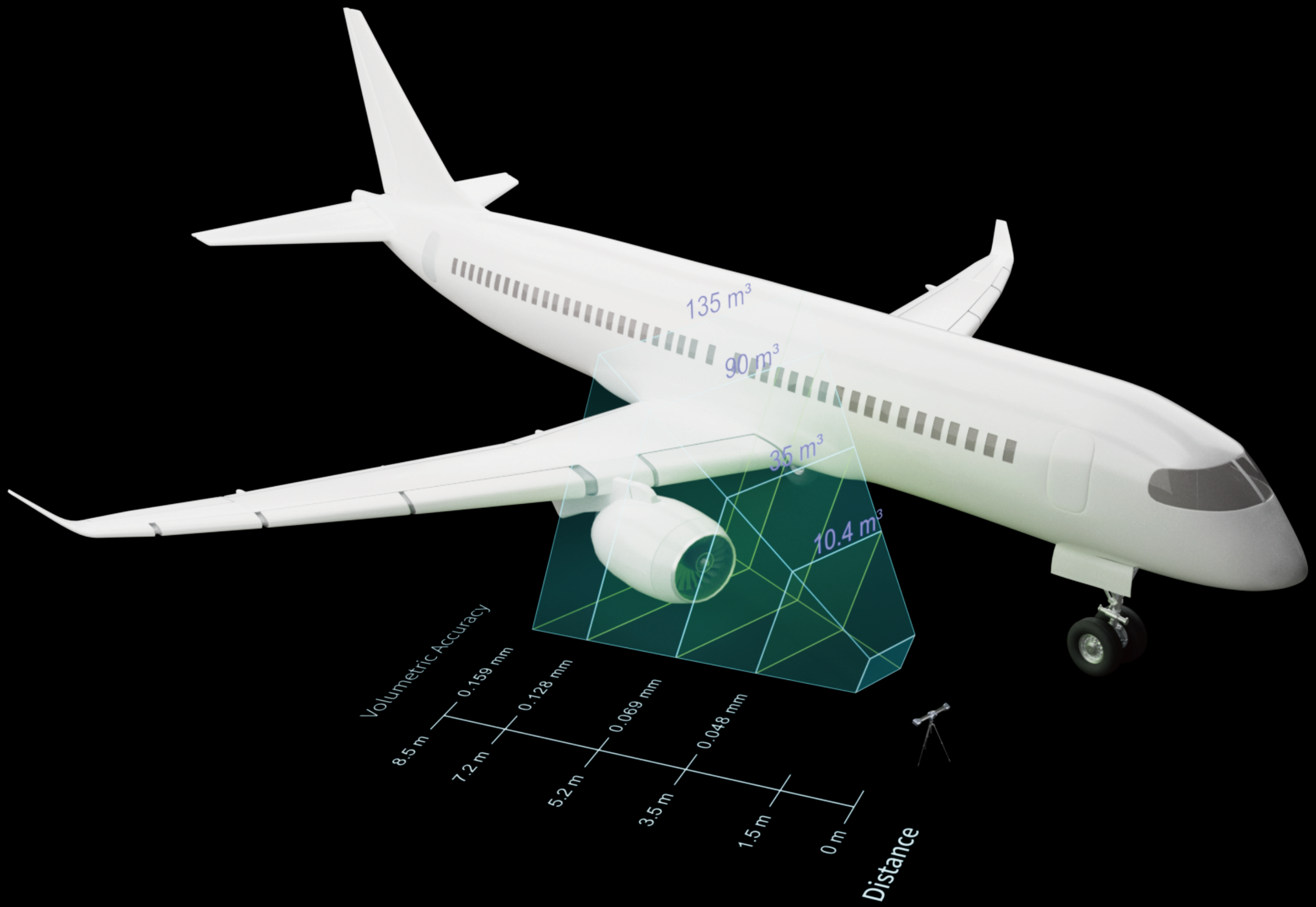
The system connects automatically when switched on, without requiring any complex settings, and starts scanning instantly.



User-friendly Operation

Its user-friendly buttons are easy to operate, offering flexible and free 3D scanning.





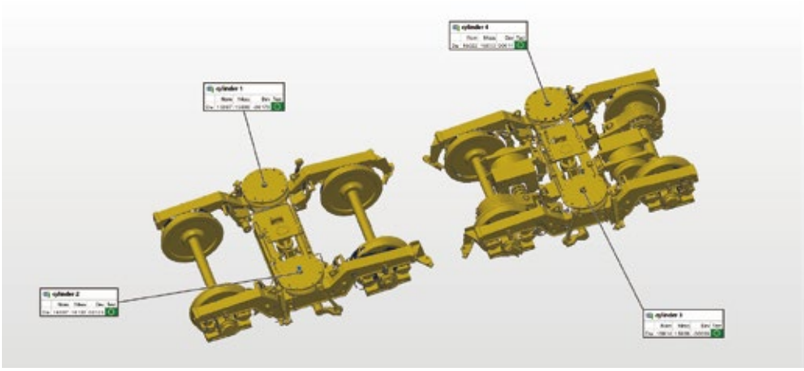
Excellent and Stable Performance

The TrackScan Sharp measurement system features metrology-grade hardware and an innovative in-housed developed algorithm. In this way, the system achieves a maximum volumetric accuracy of 0.048 mm (10.4 m^3), capable of meeting stringent industrial requirements for measurements.

The 3D scanner embraces an innovative stable structure with CFFIM technology to ensure lightweight design and high strength. Built tough, it features a stable performance and it is unaffected by thermal variations to ensure high-precision measurements. Thanks to its stable and integrated structure, users can grip it from all directions. Therefore, technicians can hand it over and position it freely without being limited by complex operation conditions. The 3D scanner's components are integrated harmoniously, creating a unified and balanced look.

Fast 3D Scanning

Enhanced by advanced hardware and robust edge computing, TrackScan Sharp scans up to an impressive 4.86 million measurements/s with 81 blue laser lines. Whether it is complex aerospace parts or large-scale machinery, TrackScan Sharp is ideal to capture 3D data and identify deviations of parts rapidly, which facilitates more efficient and intelligent measurements for manufacturers.



Precise Detail Capture

The system's fine scanning mode powered by 17 parallel laser lines enables it to scan over a large area while generating point clouds fast. This feature provides exceptional detail-capturing efficiency, allowing users to capture intricate details such as slots and angles with high precision and speed. As a result, parts are meticulously represented in 3D, ensuring accurate and comprehensive digital models.



Versatile Compatibility



Intelligent edge detection

It boasts an optional function of intelligent edge detection, which is enabled by gray-value measurement. Users can inspect features such as holes, slots, rectangles, rivets, and edges precisely. It is capable of 3D scanning and obtaining information such as positions and diameters.

Automated measurement

Its brand-new 3D scanner structure is customized to be mounted on a robotic arm more suitably. Its 360-degree distributed target sets allow for all-round and precise tracking. It helps form an efficient batch measurement systems.

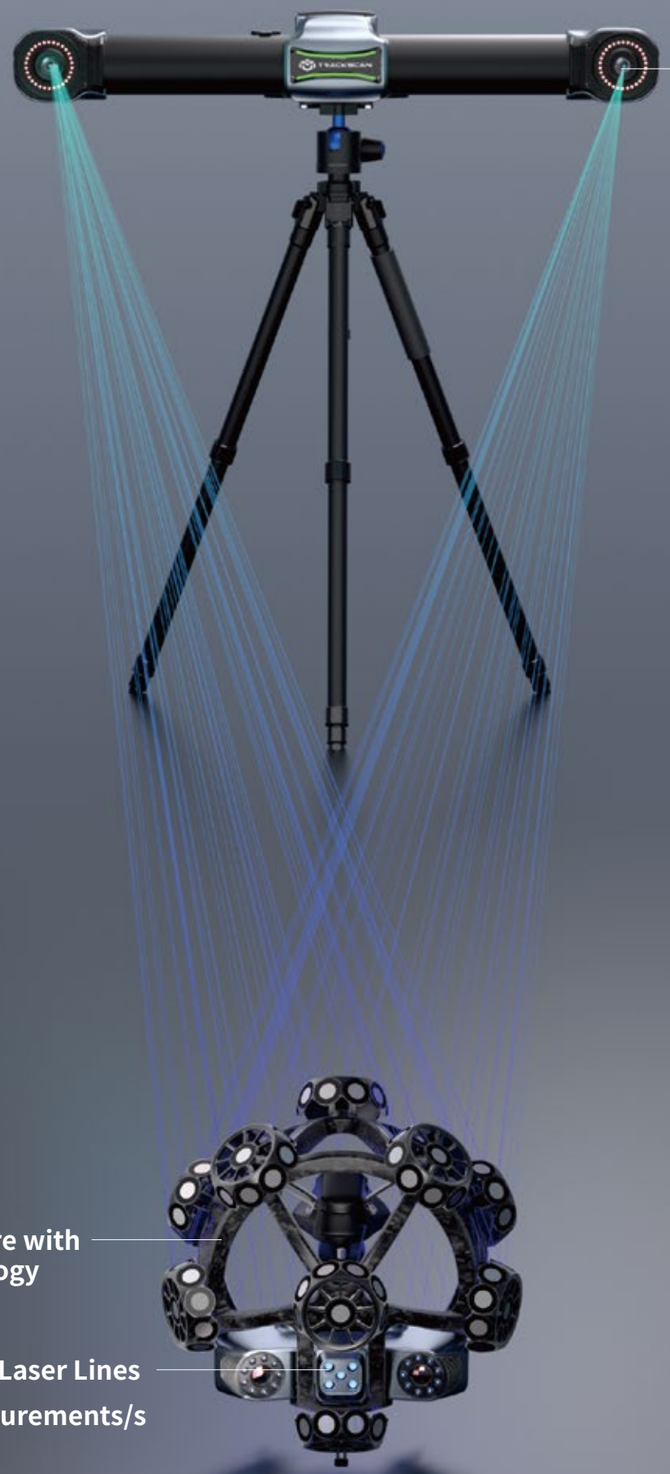
Multi-tracker measurement

Its measurement range can be dynamically extended by adding more i-Trackers so that it can measure large-scale objects without compromising accuracy.



i-Probe500

It can be paired with a tracking i-Probe 500 to probe inaccessible areas such as reference holes and hidden points. This contact measurement probe can ensure precise results with both wired and wireless options.



25-MP Camera
Edge Computing
Large-volume Tracking

Stable Structure with
CFFIM Technology

99 Blue Laser Lines
4.86 million Measurements/s

Technical Specifications

Type		TrackScan Sharp-S	TrackScan Sharp-E
Scan mode	Ultra-fast scanning	81 blue laser lines (Triple Cross Technology)	
	Hyperfine scanning	17 blue parallel laser lines	
	Deep-hole scanning	Extra 1 blue laser line	
Accuracy [1]		up to 0.025 mm	
Measurement rate up to		4,860,000 measurements/s	
Scanning area up to		800 mm × 700 mm	
Laser class		Class II (eye-safe)	
Resolution up to		0.020 mm	
Volumetric accuracy [2]	10.4 m^3 (3.5 m)	0.048 mm	0.049 mm
	35 m^3 (5.2 m)	0.069 mm	0.070 mm
	90 m^3 (7.2 m) [3]	0.128 mm	0.130 mm
	135 m^3 (8.5 m) [4]	0.159 mm	-
Volumetric accuracy (with MSCAN photogrammetry system)		0.044 mm + 0.012 mm/m	
Stand-off distance		300 mm	
Depth of field		400 mm, 800 mm (Large depth of field)	
Hole position accuracy		0.050 mm	
Output format		.stl, .pj3, .igs, .asc and etc., customized	
Operating temperature range		-10–40 °C	
Operating humidity range (non-condensing)		10-90 % RH	
Interface mode		USB 3.0, Network Interface	
Certification		CE, Rohs, WEEE, FCC	
Patents		CN109000582B, CN110992393B, CN111678459B, CN111694665B, CN112802002B, CN112867136B, CN112964196B, CN113188476B, CN113340234B, CN113432561B, CN113473034B, CN113514008B, CN113766083B, CN114001696B, CN114205483B, CN114554025B, CN114627249B, CN115289974B, CN115325959B, CN115493512B, CN115511688B, CN115661369B, CN115690333B, CN115695763B, CN116136396B, CN116206069B, CN116244730B, CN209263911U, CN210567185U, CN211121096U, CN214149174U, CN218103220U, CN218103238U, CN218411072U, CN218584004U, CN218734448U, CN219829788U, CN219834226U, CN307756797S, EP3392831B1, EP3907702B1, KR102096806B1, US10309770B2, US11060853B2, US11493326B2	

(1) ISO 17025 accredited: Based on VDI/VDE 2634 Part 3 standard and JJF 1951 specification, probing error (size) (PS) performance is evaluated.
(2) ISO 17025 accredited: Based on VDI/VDE 2634 Part 3 standard and JJF 1951 specification, sphere spacing error (SD) performance is evaluated.
(3) The industrial-grade high-precision measurement range of TrackScan Sharp-E is 90 m^3, and its effective measurement range is 125 m^3.
(4) The industrial-grade high-precision measurement range of TrackScan Sharp-S is 135 m^3, and its effective measurement range is 233 m^3.

*Our company reserves the right to interpret and modify the parameters and images in this manual within the scope of law.

