TRACKSCAN-SHARP

Optical 3D Measurement System

SCANTECH

IT3D GROUP

Extensive Tracking, Accurate Measuring

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TRACKSCAN-SHARP

TrackScan-Sharp, consisting of a portable 3D scanner i-Scanner and an optical i-Tracker, is a brand-new generation of Scantech's optical 3D measurement system for measuring large-scale parts. It brings optical measurement to a whole new level by offering a tracking distance of up to 6 meters, a volumetric range of 49 m³, and volumetric accuracy of up to 0.049 mm (10.4 m³).

Engineered with i-Tracker's on-board processor for pre-computation, 25-megapixel industrial cameras, and cutting-edge technologies, the TrackScan-Sharp is ideal for measuring large-sized parts or multiple parts at the same time without the hassle of moving trackers frequently.

It supports wired and wireless data transfer to cater to different industrial uses, making scanning even easier. It can also work with an auxiliary light module to inspect holes and slots. TrackScan-Sharp is optimal for efficient and stable measurements to enhance product development, quality control, and more.

i-Scanner
21 blue laser crosses
2.6 million measurements/s

i-Tracker
Pre-computation
Large-volume tracking

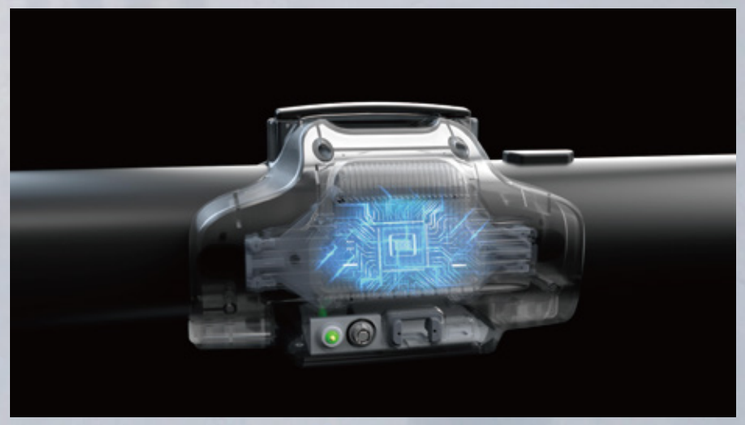
T-Probe
Wireless and portable
Singe-point repeatability 0.025 mm

Ultra-high Pixels for Intricate Details

TrackScan-Sharp tracking 3D scanning system is equipped with a brand-new industrial camera. The camera features 25 megapixels, which is 5 times that of its previous generation. Thanks to its DLA technology, long-distance depth of field, and strong anti-interference ability, the system can automatically acquire clear images in a range as long as 6 meters.

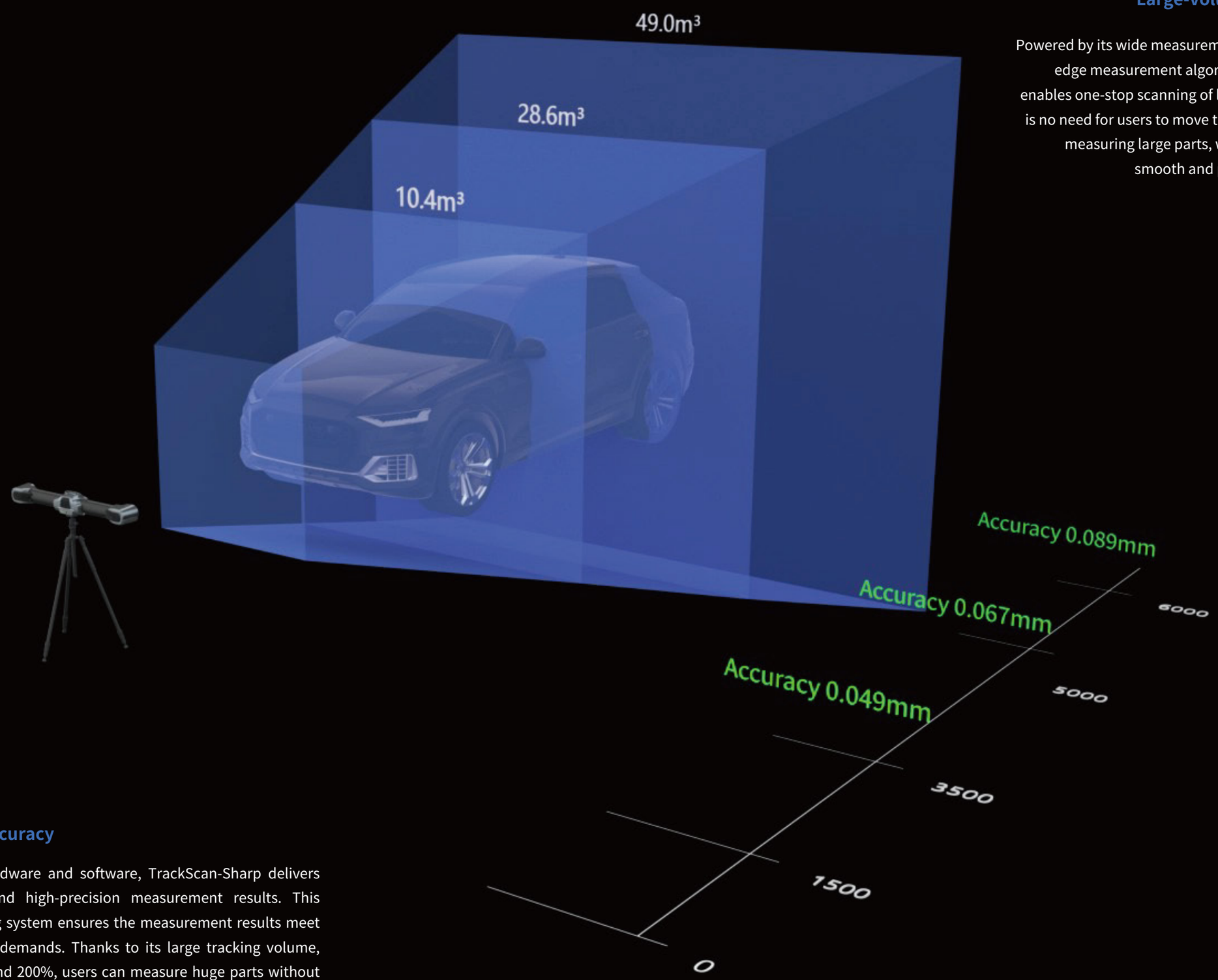
Pre-computation & Impressive Performance

The newly designed i-Tracker has an onboard processor for efficient image processing and data computation, which can deliver coordinates in real time. This innovative pre-computation saves the computer's computing power, so that it's more capable of processing the scanned data. It optimizes the data and makes it more reliable and stable, impressing users with outstanding performance.



Large-volume Measurement

Powered by its wide measurement volume and robust edge measurement algorithm, TrackScan-Sharp enables one-stop scanning of large-scale parts. There is no need for users to move tracker frequently when measuring large parts, which ensures efficient, smooth and precise measurements.



Remarkable Accuracy

With powerful hardware and software, TrackScan-Sharp delivers metrology-level and high-precision measurement results. This optical 3D tracking system ensures the measurement results meet high metrological demands. Thanks to its large tracking volume, increased by around 200%, users can measure huge parts without compromising precision.

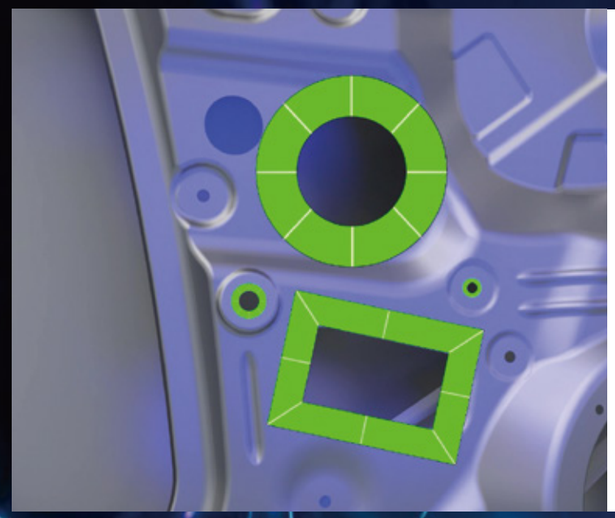
Fast 3D Scanning

Due to its optical tracking technology, TrackScan-Sharp can precisely measure parts without having to stick reference targets. Its large tracking volume allows users to measure multiple parts at the same time, thus significantly improving operations efficiency.

A New Era of Data Transmission

The 3D scanning system can transfer data both with and without wires. With wired mode, the system can send data over a long distance in line with industrial measurement standards. Optional wireless mode supports applications, in different working conditions, which is convenient due to its plug-and-play operations. It can be set up quickly and operated flexibly to cater to various environmental conditions, ensuring efficient measurements.

Vast Applications



It boasts a shadow-less-light edge detection with high-precision gray value measurement. Users can inspect closed features precisely, especially threaded holes. Good measurements are ensured by delivering accurate and repeatable measurement results such as positions and diameters.

Its highly-adaptive data acquisition algorithm ensures that the equipment can easily obtain the 3D data of objects with different surfaces and materials such as reflective, dark, and colorful surfaces.

It can be paired with a portable CMM T-Probe (optional with different lengths) to probe inaccessible areas, such as holes and hidden points. This contact measurement probe can deliver single-point repeatability of up to 0.025 mm.

Its i-Tracker can be combined with tool simulators and path planning software to form M-Track, an intelligent robotic path planning and guiding system. The system comprises perception, planning, and execution modules, which cater to different applications such as grinding, coating, welding, and more.

Innovative Design

Made of aerospace-grade carbon fiber in a sphere shape, the i-Scanner is for heavy use. Its ergonomic handle can ensure the long-session use of the 3D scanner without causing much fatigue, which ensures free measurement.

The i-Tracker has an intuitive light band that shows operating status in real time. Its hollow grille design helps cameras remain at a stable temperature throughout the scanning process.

Optical Probing, Free and Flexible Measurement

T-Probe is a portable CMM probing system that comes with the i-Tracker to obtain dimensions of features, such as reference holes and hidden points. It can be widely used in the measurement of fixtures, stamping parts, and marking for actual machining allowance.

Free Measurement without Limitations

When combined with i-Tracker, T-Probe can be used wirelessly, free from mechanical constraints or cables. T-Probe can automatically align the coordinates of scanned data and probing data, which means users can probe the part right after 3D scanning. It offers total freedom of movement for measuring large parts with complex features.

Robust Performance and Enhanced Efficiency

T-Probe features single-point repeatability of up to 0.025 mm and a volumetric accuracy of up to 0.049 mm. Its measurement rate can reach 60 measurements/sec, built for efficient and accurate measurements of parts of various kinds.

Vast Applications

T-Probe comes in different probe sizes, which can be used on complex shop floor regardless of vibrations. When paired with Tviewer or third-party software, it can conduct real-time optical probing.

Comfortable Use and Easy Operation

Made in carbon fiber, T-Probe is lightweight, weighting only 450 g. Its portability and ergonomic handle make it easy to probe. Operators can work with it for a long duration without feeling tired.

Technical Parameter

Type		TrackScan-Sharp 49
Scan mode	Ultra-fast scanning	21 blue laser crosses
	Hyperfine scanning	7 blue parallel laser lines
	Deep-hole scanning	1 blue laser line
Accuracy [1]		Up to 0.025 mm
Measurement rate		Up to 2,600,000 measurements/s
Scanning area		Up to 500 mm × 600 mm
Laser class		Class II (eye-safe)
Resolution		0.020 mm
Volumetric accuracy [2]	10.4 m^3 (Tracking distance 3.5 m)	0.049 mm
	28.6 m^3 (Tracking distance 5.0 m)	0.067 mm
	49.0 m^3 (Tracking distance 6.0 m)	0.089 mm
Tracking Distance per i-Tracker		6000 mm
Volumetric accuracy (with MSCAN photogrammetry system)		0.044 mm + 0.012 mm/m (>6m)
Hole position accuracy		0.050 mm
Camera pixels of i-Tracker		25 megapixels
Stand-off distance		300 mm
Depth of field		400 mm
Part size range (recommended)		0.1 m-12 m
Operating temperature range		0 °C-45 °C
Operating humidity range (non-condensing)		10-90% RH
Interface mode		USB 3.0, Network Interface
Certification		CE, RoHS, WEEE
Patents		CN106500627B, CN106500628B, CN206132003U, CN204854633U, CN204944431U, CN204902788U, CN204963812U, CN204902785U, CN106403845B, US10309770B2, CN204854633U, CN105068384B, CN105049664B, CN106403845B, CN111694665A, CN214375417U, CN214379242U, CN214379241U, CN214149174U, CN109000582B, CN112802002B, CN210567185U, CN211121096U,C N114001671B, CN114001696B, CN114554025B, CN114205483B, CN113514008A, US10309770B2, US11060853B2, KR102096806B1, EP3392831B1, CN218411072U, CN115325959B, CN218103238U, CN218103220U, CN113670202A, CN113766083A, CN114189594A, CN114627249B, CN115493514A, CN115493512A, CN115451862A, US11493326B2, CN115695763B, CN115690333A, CN307756797S, CN218584004U

(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.

Technical Parameter

Type		T-PROBE
Accuracy		0.025 mm
Volumetric accuracy	10.4 m^3	0.049 mm
	28.6 m^3	0.067 mm
Measurement rate		60 measurements/s
Part size range (recommended)		0.2 m-6 m
Weight		450 g
Dimension		345*55*121 mm
Operating temperature range		0 °C-40 °C
Operating humidity range		10-90 % RH
Patents		CN204329903U, CN104501740B, CN104165600B, CN204988183U, CN204854633U, CN204944431U, CN204902788U, CN105068384B, CN105049664B, CN204902784U, CN204963812U, CN204902785U, CN204902790U, CN106403845B, CN209197685U, CN209263911U, CN106500627B, CN106500628B, CN206132003U, CN211121096U, US10309770B2, KR102096806B1