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SHINING 3D®



Portable Wireless Optical Coordinate Measuring System:

FREESCAN TRAK & FREETRAK PROBE

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Reliable 3D measurement solution at any industrial environment



- Wireless & Portable
- Markers-free
- Highly-stable
- Accurate

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Portable Wireless CMM Scanning System

For complex geometries scanning and large-volume measuring

Freescan Trak

Based on SHINING 3D's latest technology, the optical tracker is capable of capturing the spatial position of the scanner structure in real time, offering a portable, efficient, and reliable 3D measurement solution. The system helps the operator to get rid of the time-consuming process of sticking markers. This makes it simple to obtain the 3D data of medium to large size objects with metrology-grade accuracy. It is suitable for various static and dynamic applications, including large scale 3D inspection in aerospace, automotive, shipping and energy industries etc.

Key Features

Dynamic referencing

The markers are used to create a reference structure system. The tracker or the part can be moved freely during measurement, allowing users to scan in unstable environment.

Metrology-grade measurements

The accuracy is up to 0.03mm and the resolution can be up to 0.05mm. The system has high repeatability.

Wireless technology

No physical cables between the tracker and the scanner. Use a precise wireless technology between the two terminals to setup 3D scan measurement system

Ease of use

A brand-new build-in processor, no need of external computing box, makes it easier to setup. The measurement rate of the FreeTrak is up to 70Hz.



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The Scanner

Independent working mode

The scanner retains the light source and can be used as a standalone scanner to do some scanning jobs.

AIRMASTER wireless solution

The scanner can be adapted to AIRMASTER™ and does not need any cable connections to the computer or to the optical tracker.

Lightweight

The weight is 1.2kg and it is easy to be held.



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Portable Wireless CMM Probing System

For real time contact 3D inspection



FreeTrak Probe

The portable wireless CMM probing system ensures reliable measurements in shop floor and any other challenging industrial environments. The system is not susceptible to environmental influences such as vibration and position changes during operation, allowing users to move the optical tracker or wireless probe at any time during the measurement process to generate the same high accuracy data. The system is the ideal alternative for solving production issues caused by bottlenecks present in traditional coordinate measuring machines, optimizing the overall efficiency of product cycle.

Key Features

High-accuracy

Accuracy up to 0.020mm, with high repeatability.

Dynamic referencing

The markers are used to create a reference structure system. This allows the tracker or the object to be moved during measurement. Vibration in the environment will not affect the measurement results.

Freedom and flexibility of measurement

There is no cable between the probe and the tracker for maximum versatility.

Instant inspection

Obtain real-time CAD inspection reports while measuring with the probe.

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The Probe

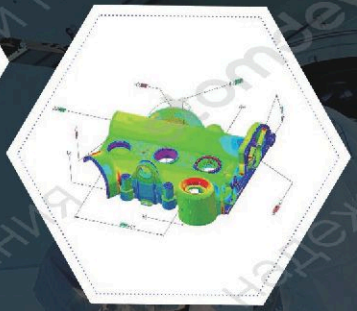
Multi-function buttons design

With multi-functional buttons, the probe interacts seamlessly with the software.

Continuous Workflow

Longer battery life allows for a continuous measurement mode.

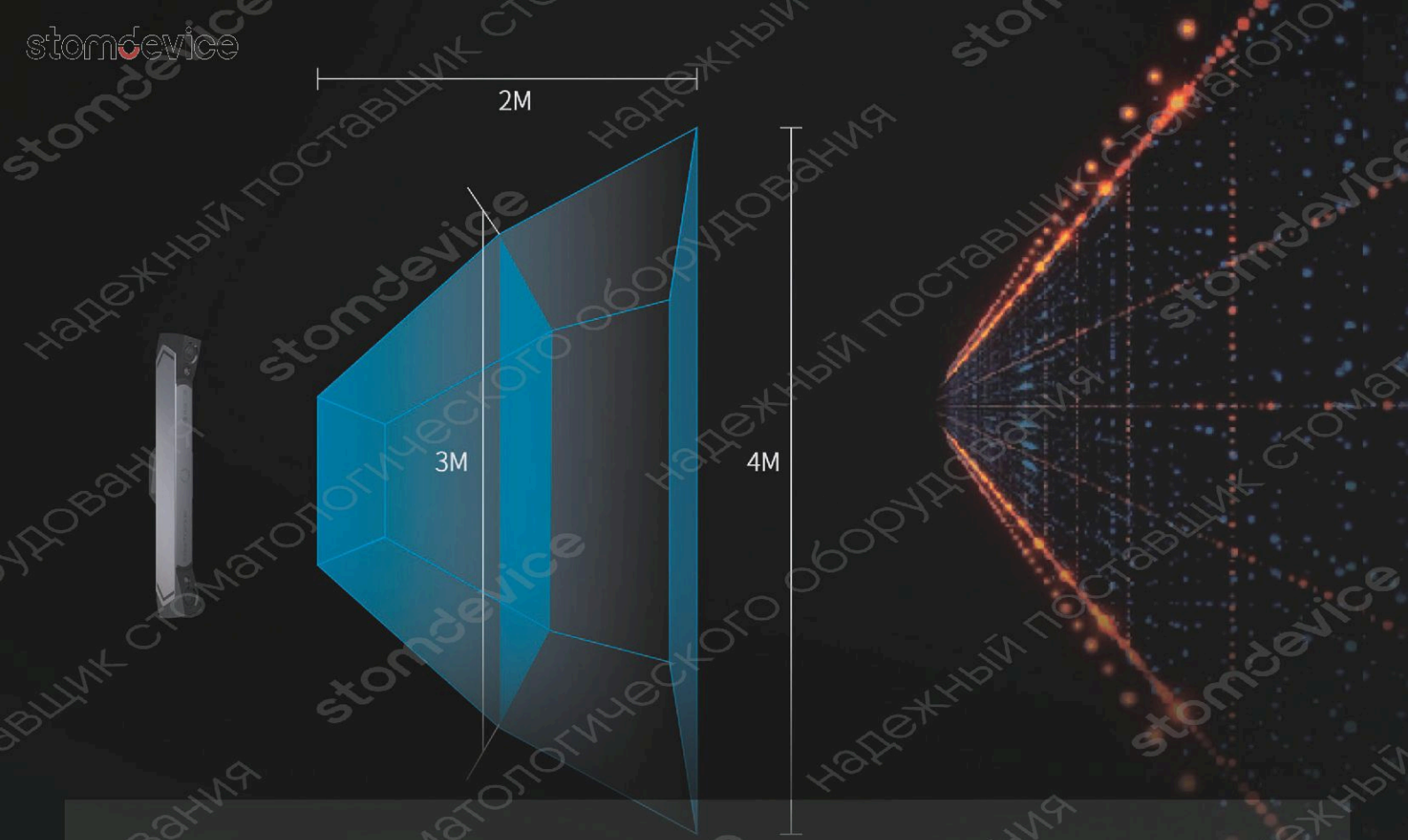




Integrated Powerful Inspection Software

FreeTrak system is compatible with a wide range of analysis software. EinSpector is a powerful 3D inspection software which uses the accurate alignment between design data and measured data, chromatographic analysis of deviation, and the automatic calculation of geometrical tolerances. It provides powerful and effective 3D digital solutions for the automotive, aerospace, electronics, nautical, and medical industries.

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APPLICATIONS

INSPECTION

First part inspection
Product quality inspection
Deformation analysis
Positioning and alignment of components

REVERSE ENGINEERING

3D modeling
Maintenance, repair and overhaul
Die and mold design
Tooling and jig design

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TECHNICAL SPECIFICATIONS

	FREETRAK	FREESCAN TRAK
Accuracy	Up to 0.030 mm	
Volumetric Accuracy	15m³, 0.1mm	
Resolution	0.050 mm	
Measurement Rate	480,000 measurements/s	
Part Size Range (recommended)	0.2–6 m	
Connection Type	Support wireless and wired connection	
Weight	7.2kg	1.2 kg (Scanner) +900g (Airmaster)
Dimensions(mm)	1079 x 237 x 110	210 x 210 x 215
Light Source	Infrared LED	Red LED & 7 laser crosses + 1 extra line
Laser Class	N/A	Class 2
Stand-off Distance	3000mm	300mm
Depth-of-field	2000mm	250mm
Scanning Area	3000 x 2500mm	275 x 250 mm
Connection Standard	IEEE802.11n/ac, IEEE802.3ab	
Output Formats	.stl, .asc	
Operating Temperature Range	5–40°C	
Operating Humidity Range (non-condensing)	10–90%	

	FREETRAK	FREETRAK PROBE
Accuracy	Up to 0.020 mm	
Volumetric Accuracy	15m³, 0.1mm	
Single Point Repeatability	0.060mm	
Measurement Rate	Up to 70 measurements/s	
Connection Type	Support wireless and wired connection	
Weight	7.2kg	580g
Dimensions(mm)	1079 x 237 x 110	380 x 140 x 70
Light Source	Infrared LED	N/A
Connection Standard	IEEE802.11n/ac, IEEE802.3ab	
Operating Temperature Range	5–40°C	
Operating Humidity Range (non-condensing)	10–90%	

Notice: SHINING 3D reserved the right to modify or adjust above specifications and features.

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