

SCANTECH™

Industrial 3D Measurement Solution

SIMSCAN 3D SCANNER



SIMSCAN Scanner Technical Proposal

1. Company Introduction

SCANTECH is one of the earliest high-tech companies starting to research and develop handheld 3D visual measurement devices across the world. Leveraging its profound technological prowess, SCANTECH has established strategic partnerships with a number of world-class companies and reached cooperation for joint R&D centers and co-development plans with multiple optical metrology companies in Europe. SCANTECH products are sold to more than 50 countries and regions, serving over 5000 enterprises. The presence of our distributors and international sales and technical support teams has been expanded all across the globe, providing industrial frontier 3D measurement solutions for prominent enterprises and research institutions like Boeing, NASA, COMAC, BMW, Volkswagen, GM, Apple, Huawei, Siemens, JCB and Sany.

SCANTECH has been gaining rapid growth ever since the establishment due to our continuous input in R&D and management, as well as the attraction of top-notch talents. R&D personnel account for 50% of the company staff, among them, the proportion of masters and doctors is as high as 80%. The talent pool enables us to develop a series of proprietary 3D digital measurement systems. Our product line stretches from metrology-grade online and offline equipment and consumer-grade color 3D scanners, which are widely applied in areas of aerospace, automotive/rail transport, mechanical manufacturing, medical care and rehabilitation, digital arts for TV and film, education and research, cultural heritage protection, 3D printing and VR/AR. SCANTECH helps companies fulfill optimized solutions to quality and efficiency and open up a vast territory for 3D digitalization.



2. Product Introduction

2.1 Overview

SIMSCAN, the only hand-sized 3D scanner in the market so far, is a disruptive innovation of the traditional 3D scanners' structure and a revolutionary product in 3D optical metrology industry.

No matter in narrow spaces, or under huge objects, SIMSCAN performs high-quality 3D scanning without any restriction of working environment. Metrology-grade measurement system helps capture every detail and construct 3D model in a very short time. Designed under minimalism, the metal shell enables SIMSCAN to achieve a balance between weight and performance.

2.2 Operation Principles

1) Two sets of cameras in scanner can respectively obtain the projection laser from the object. The laser will deform when scanner moving on the object surface, then we can calculate the linear 3D information from the laser as the distance between two cameras is accurately calibrated in advance.

- 2) Scanner identifies the spatial position according to the visual markers on the object surface when scanning, which is used for spatial position conversion.
- 3) The 3D position information where the laser goes through can be acquired by utilizing the linear 3D information and relative spatial position when scanner moves, thus form the continuous 3D information.

2.3 Features

Single-handed Control

Weighted only 570 g and sized by 203 × 80 × 44 mm, SIMSCAN brings unparalleled simpleness for scanning anything with one hand.

Ultra-portable

No matter in narrow spaces, or under huge objects, the remarkable portability of SIMSCAN enables it to proceed 3D measurement anywhere and anytime.

Detail, Everywhere

Under parallel blue laser mode or single line deep hole mode, every detail is nowhere to hide, even for scanning complex surface.

Smooth 3D Experience

11 crossed blue lasers, 2,020,000 measurements/s and 410*400 mm scanning area bring smooth and efficient 3D digitizing experience.

Toughest Ever

Revolutionary full metal shell provides solid protection, aerospace-grade materials ensure extraordinary durability.

Aesthetic Design

With ergonomic design, SIMSCAN fits perfectly in your palm, truly realizing a perfect fusion of aesthetics and practicality.

2.4 Parameter

Chart 1. SIMSCAN Technical Parameter

Type		SIMSCAN
Scan mode	Ultra-fast scanning	11 blue laser crosses
	Hyperfine scanning	7 blue parallel laser lines
	Deep hole scanning	1 extra blue laser line
Laser lines in total		30
Accuracy		0.020 mm
Scanning rate		Up to 2,020,000 measurements/s
Scanning area		Up to 410 mm × 400 mm
Laser class		Class II (eye-safe)
Resolution		0.025 mm
Volume accuracy		0.020 mm + 0.040 mm/m
Volumetric accuracy (With MSCAN-L15)		0.020 mm + 0.015 mm/m
Stand-off distance		300 mm
Depth of field		250 mm
Output formats		pj3,asc,igs,txt,mk2,umk,stl,ply,obj
Open formats		pj3,pjs,asc,igs,txt,mk2,umk,refxml,stl,ply,step
Operating temperature range		-10~40°C
Interface mode		USB 3.0
Dimensions		203 mm × 80 mm × 44 mm
Weight		570 g
Patents		CN204329903U,CN104501740B,CN204854633U ,CN204944431U,CN204902788U,CN105068384 B,CN105049664B,CN204902784U,CN20490278 5U,CN106403845B,CN110030946B,CN1118333 92A,CN212300269U,CN211904059U,CN211696 268U,CN306053019S,CN212606697U,CN11193 2465A,CN111694665A,CN306321502S

2.5 Applications

- Automobile manufacturing
- Aerospace
- Power generation
- Mold manufacturing
- Casting inspection
- Construction machinery
- Design inspection
- Architecture sculpture
- Academic research

3. Configuration

ScanTech has the capacity of producing SIMSCAN 3D scanner nearly 300 ~ 400 sets and adequate accessories per year, which can deal with emergency circumstances.

Chart 2. SIMSCAN Standard Configuration

Component	Quantity
3D scanner	1
Calibration target	1
Cable	1
Power adapter	1
6mm reflective markers	4000
3mm reflective markers	1000
USB	1
Encryption lock	1
Waterproof case	1
ScanViewer software	1



4. Customer Support

4.1 Training

Our goal is to develop skills by providing flexible training according to participants' level of knowledge.

To ensure training effect and consistency, our professional trainers combine training plans with other tools to clearly explain training objectives, introduce the theory, guide hands-on experience and evaluate trainees.

4.2 Maintenance

ScanTech offers efficient service and support to ensure satisfactory solution.

We promise a one-year warranty after sale. Taking advantage of worry-free maintenance and repair coverage for all of your hardware and software, we will have a plan suited to your needs while your device is under warranty.

5. Application Cases





www.3d-scantech.com