JAMES PRECISION ENGINEERING PTE LTD

27 Woodlands Industrial Park E1, #02-06 Hiangkie Industrial Building IV, Singapore 757718
Tel: (65)63673789   E-mail: jamespl@singnet.com.sg
web: www.cmm.com.sg

1) KSCAN-Magic Handheld 3D Scanner System

- KSCAN-Magic series portable 3D scanner is developed by Hangzhou Scantech Co., Ltd.
- It adopts multiple beam laser to obtain the three-dimensional point from object surface.
- Operator can hand-hold the device and adjust the distance and angle between the scanner and measured object timely.
- It can cooperate with the global photography measurement system when scanning the large piece object to eliminate the accumulated error and improve the global scanning accuracy.
- The scanner can also be conveniently carried to industrial field or production workshop, and scanned the object efficiently and accurately according to its size and shape.

Model & Specification

Type		KSCAN-Magic
Scan mode	Ultra-fast scanning	11 blue laser crosses
	Hyperfine scanning	7 blue parallel laser lines
	Large area scanning	11 parallel infrared laser lines
	Deep hole scanning	1 extra blue laser line
Laser lines in total		41
Accuracy		0.020 mm
Scanning rate		1,350,000 measurements/s
Scanning area		1440 mm × 860 mm
Photogrammetry system	Standard configuration	Built-in
	Scanning area	3760 mm × 3150 mm
	Depth of field	2500 mm
Laser class		CLASS II (eye-safe)
Resolution		0.010 mm
Volume accuracy	Work alone	0.030 mm/m
	Work with 1m reference bar	0.020 mm/m
	Work with MSCAN-L15	0.020 + 0.015 mm/m
Stand-off distance		300 mm
Depth of field		925 mm
Output formats		.stl, .ply, .obj, .igs, .stp, .wrl, .xyz, .dae, .fbx, .ma, .asc or customized
Operating temperature range		-10~40°C
Interface mode		USB 3.0

2. Hardware Configuration

Configuration Item	Quantity
3D scanner hand-held terminal	1 set
Calibration Board with Reference Bar	1 set
Combination cable	2 piece
Power adapter	1 piece
6mm reflective mark points	4000 pieces
3mm reflective mark points	1000 pieces
Coded point	168 pieces
scan software USB Disk	1 piece
Dongle	1 piece
Waterproof case	1 set
Demo Part	1 piece

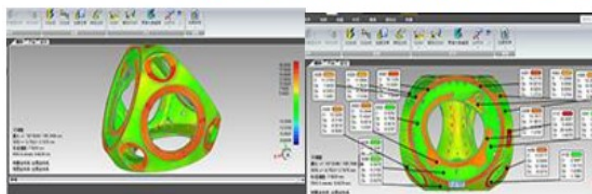# JAMES PRECISION ENGINEERING PTE LTD

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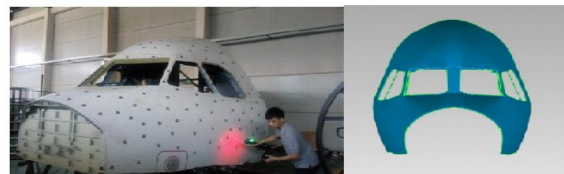Tel: (65)63673789   E-mail: jamespl@singnet.com.sg
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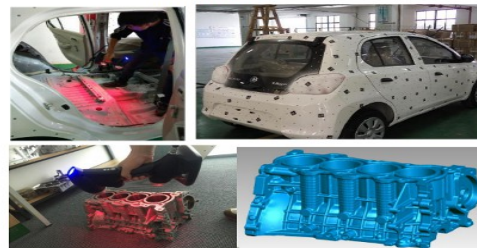## 3. Software & Hardware advantage:

- 11 cross laser lines scanned quickly; single blue laser line can obtain deep hole data.
- Seven parallel laser lines support great details.
- Above working mode can be switched by press one button.
- Automatically generate the STL triangular mesh surface, and the data can be processed rapidly as the format is STL.
- The scan software can automatically process the point cloud data such as select, delete, remove the isolated point and non-connected one, smooth filtering, feature merge, etc.
- The software can fill marked points according to the curvature, and can also manually fill holes.
- The software possesses functions such as set the distance between scanning point, adjust the laser intensity and adjust the scanning angle.
- Device can be quickly calibrated.
- The scanned object does not need to be fixed.
- The target point automatically orientates and needs no additional mechanical arm or other tracking device.
- Connect by the Gigabit Ethernet cable and support work over a long distance.
- It possesses two high resolution image acquisition unit and a laser transmitter.
- The handheld device could be carried with the personnel. And the weight is less than 1kg.
- The device can scan at outside as well as inside. It could also scan in a narrow space such as scan the cockpit and the car interior dashboard. Multiple equipment can scan at the same time. All the data are in the same coordinate system and don't need to match it.
- Through the selection of the point cloud density to control the size of the scan file. Scan different parts according to the relative detail requirements.
- The external environment has little effect on the scanning accuracy. Even exposed to direct sunlight could the canner work normally.
- The scanner can easily deal with the car paint mirror surface as well as other black surface. Mostly, the imaging enhancement is unnecessary.
- Put separate points on three sides to achieve the splicing when scanning a small thin-walled part.
- Back Ground mode enable to set up a datum when scanning the object, only showing the scan data above the datum and remove the data below the datum automatically.
- The scan software is able to define & construct the features upon the scan data such as point, line, plane, cylinder, cone & sphere.
- The scan software itself includes the basic GD&T function such as flatness, cylindricity, sphericity, parallelism, perpendicularity, perpendicularity.
- The scan software is able to take the basic distance measurement like point to point, point to line & point to plane.
- All above basic Feature capture , GD&T and basic measurement function based in one scan software to reduce the possibility of format changing and slightly loss of features due to relevant operation.