

## Technical Parameter

| Type                               |  | KSCAN-Magic   | KSCAN-Magic II                 |
|------------------------------------|--|---|--------------------------------|
| Scan mode                          | Ultra-fast scanning  | 11 blue laser crosses   | 13 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  | 45                             |
| Accuracy <sup>(1)</sup>            |  | 0.020 mm  |                                |
| Scanning rate                      |  | Up to 1,350,000 measurements/s  | Up to 1,650,000 measurements/s |
| Scanning area                      |  | Up to 1440 mm × 860 mm  |                                |
| Photogrammetry system              | Standard configuration   | Built-in  |                                |
|                                    | Scanning area  | 3760 mm × 3150mm  |                                |
|                                    | Depth of field   | 2500 mm   |                                |
| Laser class                        |  | CLASS II (eye-safe)   |                                |
| Resolution                         |  | 0.010 mm  |                                |
| Volume accuracy <sup>(2)</sup>     | Work alone   | Up to 0.015 mm + 0.030 mm/m   |                                |
|                                    | Work with 1m reference bar   | Up to 0.015 mm + 0.020 mm/m   |                                |
|                                    | Work with MSCAN-L15  | Up to 0.015 mm + 0.015 mm/m   |                                |
| Stand-off distance                 |  | 300 mm  |                                |
| Depth of field                     |  | 925 mm  |                                |
| Portable CMM K-Probe               | Optional   | Support   |                                |
|                                    | Single point repeatability   | 0.030 mm  |                                |
|                                    | Tracking frequency   | 60 hz   |                                |
| Intelligent edge inspection module | Optional   | Support   |                                |
|                                    | Edge accuracy  | 0.030 mm  |                                |
| Pipe inspection module             | Optional   | Support   |                                |
|                                    | Output formats   | YBC / LRA / compensation value  |                                |
| Output formats                     |  | .stl, .ply, .obj, .igs, .stp, .wrl, .xyz, .dae, .fbx, .ma, .asc or customized |                                |
| Operating temperature range        |  | -10°C~40°C  |                                |
| Interface mode                     |  | USB 3.0   |                                |
| Patents                            | CN204329903U, CN104501740B, CN104165600B, CN204988183U, CN204854633U, CN204944431U, CN204902788U, CN105068384B, CN105049664B, CN204902784U, CN204963812U, CN204902785U, CN204902790U, CN106403845B, CN209197685U, CN209263911U, CN1106500677B, CN106500692B, CN206132003U, CN206905709U, CN107202554B, CN209310754U, CN209485295U, CN209485271U, CN305446920S, CN209991946U, US10309770B2, KR102096806B1 |   |                                |

## Massive Functions

Built-in photogrammetry system, intelligent edge detection, contact probing and pipe measurement fulfill diverse application needs.



**SCANTECH™**

## KSCAN-MAGIC Composite 3D Scanner

Experience Diverse Ultimate  
From Metrology Measurement



**SCANTECH™**

E-mail : [info@4d-gate.com](mailto:info@4d-gate.com)

[www.4d-gate.com](http://www.4d-gate.com)



**4D GATE**  
3D Solution & Technology

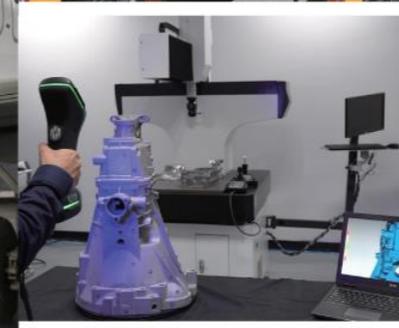
<sup>(1)</sup> ISO 11019 accredited based on VDI/VDE 2634 Part 3 standard and J1F 1991 specification, probing error (at 2θ) (PS) performance is evaluated.

<sup>(2)</sup> ISO 11020 accredited based on VDI/VDE 2634 Part 3 standard and J1F 1991 specification, sphere spacing error (SS) performance is evaluated.

# KSCAN - MAGIC

KSCAN-Magic composite 3D scanner opens up the first introduction of infrared laser + blue laser technology with five standard working modes: global initiative parallel infrared laser large area scanning, blue laser crosses fast scanning, blue parallel laser fine scanning, single blue laser deep hole scanning, built-in photogrammetry system.

KSCAN-Magic series have a revolutionary breakthrough in performance. Its unparalleled scanning speed, accuracy, detail, scanning area, and depth of field greatly optimize the 3D measurement workflows and accelerate the product time-to-market. To obtain data on hard-to-reach or complex surfaces, KSCAN-Magic series can be equipped with portable CMM K-Probe, providing a comprehensive 3D digital solution for precision measurement.

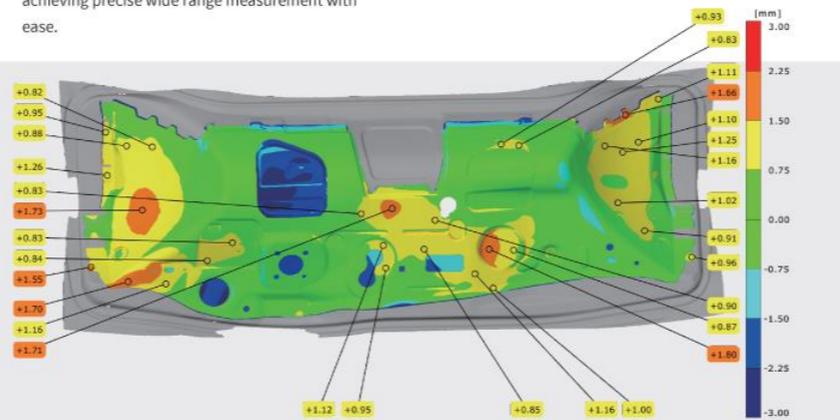


## Innovative Infrared Laser

KSCAN-Magic innovatively adopts infrared laser scanning technology in worldwide. Its ultimate scanning area reaches 1440 mm × 860 mm, achieving precise wide range measurement with ease.

## Metrology-grade NDT Measuring

0.020 mm of scanning accuracy and 0.03 mm/mm of volume accuracy; deliver ultra-high precision NDT for the aerospace industry.



## Extreme-clear Details

Under hyperfine scanning mode, KSCAN-Magic 3D scanner can accurately obtain complete data on the surface of complex objects, easily capturing every detail with resolution of 0.010 mm.

## Single Laser Line Scanning

Single laser line scanning mode accurately and quickly captures 3D data of deep holes and dead angle positions.

## Effortless Efficiency

With 41 laser lines, KSCAN-Magic 3D scanner delivers ultra-fast scanning rate of 1,350,000 measurements/s. By flexibly switching the scanning modes, it satisfies different application needs, dramatically improving working efficiency.



## No Fear of Harshness

KSCAN-Magic supports super-high work adaptability in harsh environment; realistically restores the precise 3D data of reflective and black surface.

## Technical Parameter

| Type  | KSCAN20   |                             |
|---|---|-----------------------------|
| Scan mode   | Standard mode R   | Hyperfine mode B            |
| Laser source  | 7 red laser crosses(+ 1 extra red line)   | 5 blue parallel laser lines |
| Accuracy <sup>(1)</sup>   | 0.020 mm  |                             |
| Built-in photogrammetry   | Support   |                             |
| Hyperfine scan  | Support   |                             |
| Volumetric accuracy <sup>(2)</sup><br>(based on part size)              | 0.020 mm + 0.035 mm/m   | 0.010 mm + 0.035 mm/m       |
| Volumetric accuracy with <sup>(2)</sup><br>high-precision reference bar | 0.020 mm/m  |                             |
| Resolution  | 0.050 mm  | 0.010 mm                    |
| Measurement rate  | 650,000 measurements/s  |                             |
| Laser class   | CLASS II (eye-safe)   |                             |
| Scanning area   | 550 mm X 600 mm   |                             |
| Scanning area<br>(photogrammetry)                                       | 2500 mm X 3000 mm   |                             |
| Stand-off distance  | 500 mm  | 180 mm                      |
| Depth of field  | 620 mm  | 200 mm                      |
| Depth of field<br>(photogrammetry)                                      | 2500 mm   |                             |
| Single point repeatability  | 0.030 mm  |                             |
| Tracking frequency<br>(portable CMM)                                    | 60 hz   |                             |
| Edge accuracy   | 0.030 mm  |                             |
| Pipe inspection in software   | Support YBC/LRA data  |                             |
| Output formats  | .stl, .ply, .obj, .igs, .stp, .wrl, .xyz, .dae, .fbx, .ma, .asc or customized   |                             |
| Interface mode  | USB 3.0   |                             |
| Operating temperature range   | -10~40 °C   |                             |
| Patents   | CN204329903U, CN104501740B, CN104165600B, CN204988183U, CN204854633U, CN204944431U, CN204902788U, CN105068384B, CN105049664B, CN204902784U, CN204963812U, CN204902785U, CN204902790U, CN106403845B, CN209197685U, CN209263911U, CN106500627B, CN106500628B, CN206132003U, CN206905709U, CN107202554B, CN209310754U, CN209485295U, CN209485271U, CN305446920S, CN209991946U, US10309770B2, KR102096806B1 |                             |

(1) ISO 11015 accredited: Based on VDI/VDE 2634 Part 3 standard and JJF 1961 specification, probing error (size) (PS) performance is evaluated.  
 (2) ISO 11015 accredited: Based on VDI/VDE 2634 Part 3 standard and JJF 1961 specification, sphere spacing error (SS) performance is evaluated.

SCANTECH™



**KSCAN**  
**3D SCANNER**

Dual Laser mode

Photogrammetry

Probing

E-mail : [info@4d-gate.com](mailto:info@4d-gate.com)

[www.4d-gate.com](http://www.4d-gate.com)

SCANTECH™



**4D GATE**  
3D Solution & Technology



# KSCAN

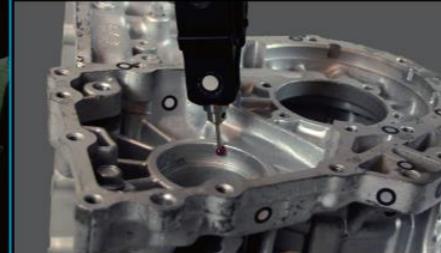
KSCAN 3D Scanner integrates photogrammetry function and dual laser scan mode which are global initiative technologies. The built-in photogrammetry function greatly expands the scan area and improves volumetric accuracy. KSCAN combines high efficiency and ultra-detail benefitting from dual laser scan mode. Moreover, KSCAN offers practical solutions targeting at objects range from 0.02m to 10m.

KSCAN supports probing that can correctly acquire the 3D data of hole, plane, edge, etc. KSCAN can fulfill different measurements and analysis functions such as pipe measurement, deformation detection and 3D inspection with 3D software---ScanViewer, which conducts effective, reliable and full-scale 3D measurement technologies for product design and inspection professionals.



## Unlimited Measuring Range

KSCAN has built-in photogrammetry system. The accuracy reaches 0.02mm and the volumetric accuracy is up to 0.035mm/m. It can individually achieve high accurate 3D measurement range from 0.02m to 10m.

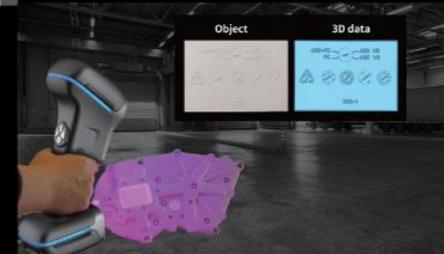


## Probing

KSCAN can quickly obtain accurate 3D data with probing and satisfy strict measuring requirements.

## Incomparable Resolution

Dual laser scan mode are freely switched. Ultra-high resolution easily captures the texture data of a coin. The resolution is up to 10µm.

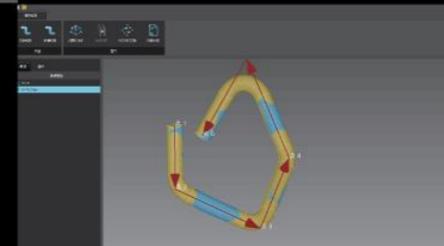


## Higher Efficiency

KSCAN upgrades in speed and scan area, which greatly reduces cost of device, time and labor.

## Multi-functional 3D Software

KSCAN can work with ScanViewer to fulfill different inspection functions such as pipe measurement, deformation detection and GD&T.



E-mail : [info@4d-gate.com](mailto:info@4d-gate.com)

[www.4d-gate.com](http://www.4d-gate.com)



**4D GATE**  
3D Solution & Technology