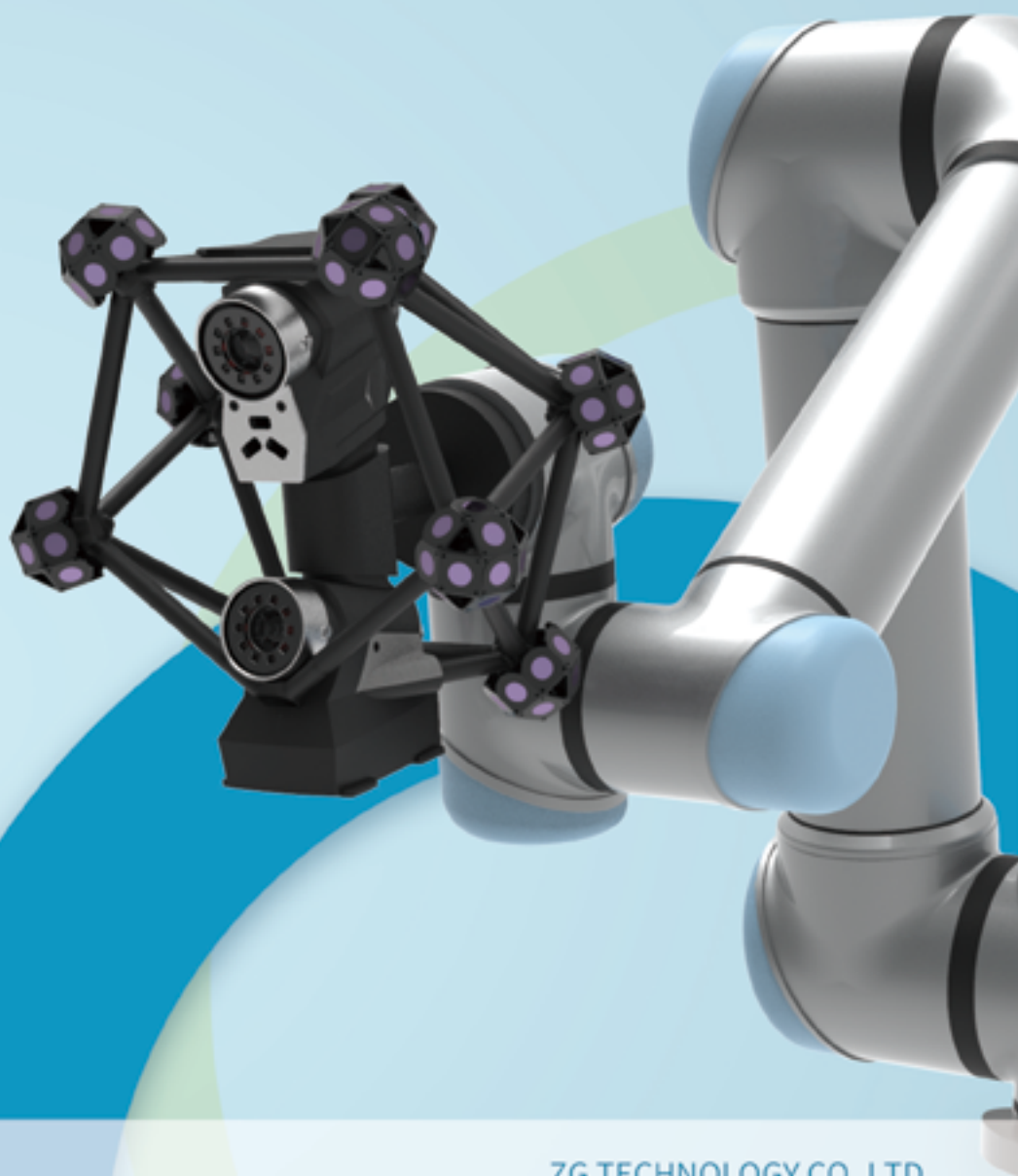




# ZG PRODUCT BROCHURE

A PROFESSIONAL 3D SCANNER SOLUTION PROVIDER IN THE WORLD



ZG TECHNOLOGY CO.,LTD.

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## ABOUT ZG

ZG Technology is a professional 3D scanner solution provider, which is an expert in research and developing 3D technology. ZG portfolio includes metrology-grade portable 3D laser scanner, optical tracking 3D scanner, smart in-line inspection system, smart full-color 3D scanner and photogrammetry system, which can widely meet different customer requirements, such as quality inspection, reverse engineering, VR&AR etc.

## TECHNICAL TEAM

ZG technology R&D team has 7 doctors and 15 masters, all are the experts in photogrammetry and 3D measurements. ZG Technology is based on independent Intellectual Property Right, cutting edge technologies and achievements from Wuhan University, which gets more than 70 national patents and software copyrights, and has received more than 20 national and ministerial-level qualification awards.

A Professional 3D Scanner Solution Provider In the World

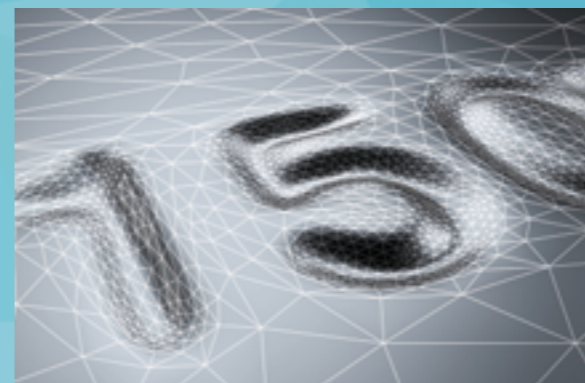
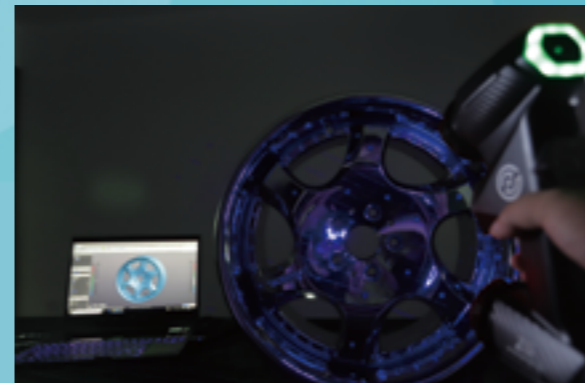
## AWARD & CERTIFICATION





# AtlaScan Multi-mode, Versatile Metrology-Grade 3D Scanner

AtlaScan 3D laser scanner is a ZG new generation of revolutionary products. In addition to all the advantages of similar products on the market, the most outstanding feature is that ZG has greatly upgraded the hardware and software performance, making AtlaScan have a large scanning range and super fast scanning efficiency, high scanning accuracy and resolution, and wide material adaptability which helps users to complete work quickly and well in the face of various complex application scenarios.



## Powerful Measurement Functionality

- The first hole flash capture function 3D laser scanner in the world;
- Easy hole measurement with innovative hole measurement accessories;
- Rich and powerful measurement and inspection function to create different features within ZG own software;

## Highly Scanning Efficiency

- Larger scanning area up to 600×550mm;
- Three scanning modes with total 41 laser lines;
- More efficiency scanning speed up to 1,600,000 measurements/s;

## Amazing Adaptability

- Intelligent guidance module to handle different surface easily;
- Smart HDR under dual exposure modes to scan black and white at the same time;
- Higher volumetric accuracy to enhance the adaptability;

## Ultra-fine Details Scanning

- Mesh resolution up to 0.01mm;
- Powerful mesh optimization to present true details;
- Local resolution adjustment to offer more details with optimized data size;
- 14 laser liners for quick ultra-fine details scanning;
- Rendering and details optimization display at real time.





## FEATURES



### 26 Laser Lines

To improve scanning efficiency dramatically

### Extra *Single* Laser Line

To scan the place hard-to-reach well

### Extra *14* Laser Lines

To feature more details

### Hole Flash Capture Technology

To instant capture hole data accurately



### Stand-off Distance

Color indicator, maximize scanning performance

### Multi-function Buttons

Quick and convenient interactive to frequent used functionalities

### Great Ergonomic Design

Offers wonderful user experience

### Interface USB 3.0

Stable connection and efficient transmission

## TECHNICAL SPECIFICATIONS

MODEL	AtlaScan	
SCAN MODE	Standard Mode	Fine Mode
MEASUREMENT RATE	1,600,000 measurements/s	900,000 measurements/s
SCANNING AREA	up to 600×550mm	
LIGHT SOURCE	26 blue laser lines + extra single blue laser line + extra 14 blue laser lines	
LASER CLASS	Class II (eye-safe)	
RESOLUTION	up to 0.01mm	
ACCURACY	up to 0.02mm	up to 0.01mm
VOLUMETRIC ACCURACY	0.02+0.03mm/m	—
VOLUMETRIC ACCURACY +PhotoShot	0.02+0.015mm/m	—
HOLE ACCURACY	up to 0.02mm	
HOLE VOLUMETRIC ACCURACY	0.02+0.03mm/m	
HOLE VOLUMETRIC ACCURACY +PhotoShot	0.02+0.015mm/m	
STAND-OFF DISTANCE	350mm	200mm
DEPTH OF FIELD	450mm	200mm
DEPTH OF FIELD @FURTHEST RANGE	550mm	
SUPER-REFERENCE (OPTIONAL)	support	
PORTABLE CMM (OPTIONAL)	support	
WEIGHT	1.0kg	
DIMENSIONS (LxWxH)	80×147×310mm	



# RigelScan

## Smart Handheld Blue Laser 3D Scanner

The RigelScan series handheld blue laser 3D scanner, is a new metrology system launched by ZG Technology Co., Ltd. RigelScan can capture fine features of the parts with an accuracy up to 0.02mm, certified by National Institute of Metrology. RigelScan applies blue laser scanning technology for easy capturing of shiny surface. In the mean time, RigelScan can be equipped with wireless module, for more easy and flexible scanning experience of large parts. Thus, RigelScan provides the perfect 3D measurement solution for all industries.



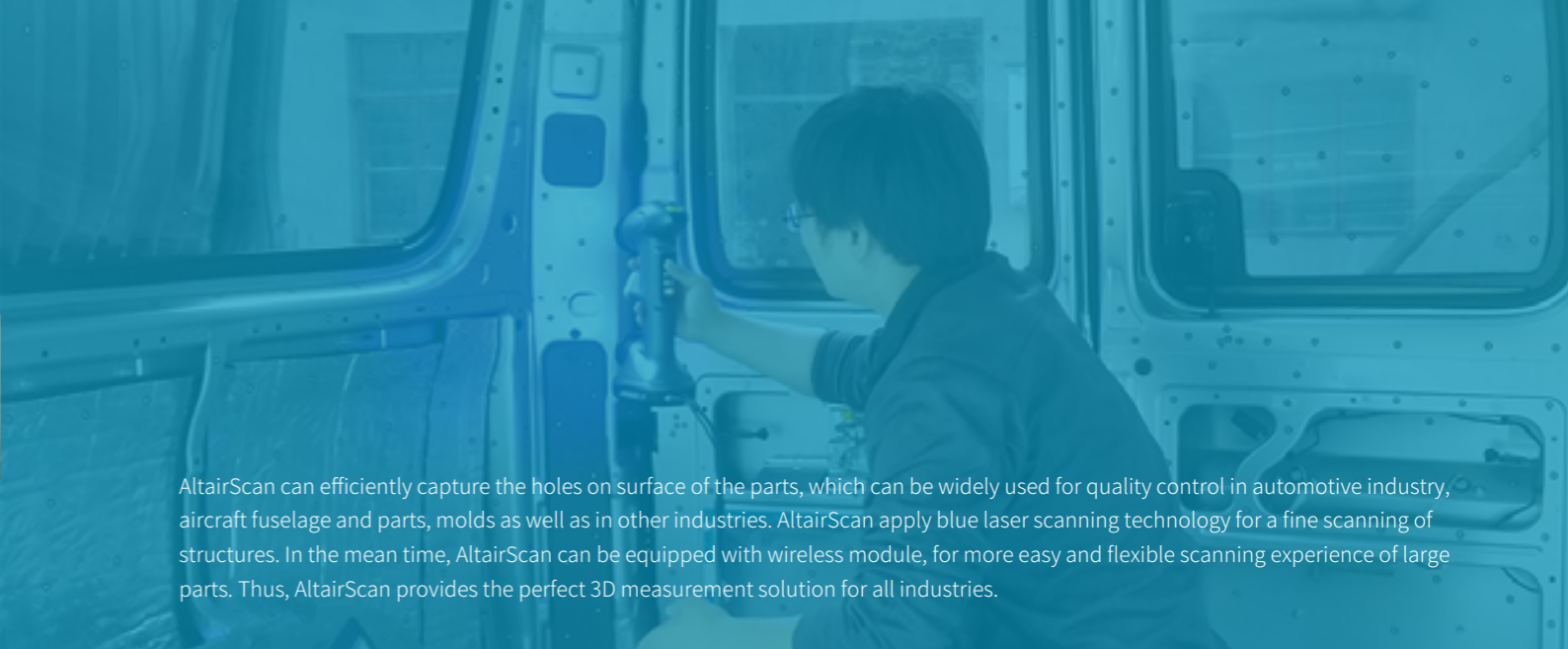
### FEATURES

- HIGH EFFICIENCY**  
Up to 1,350,000 measurements/s
- LARGE-SCALE SCANNING**  
Scanning area up to 600×550mm
- ULTRA HIGH ACCURACY**  
Up to 0.01mm
- FINE DETAIL SCANNING**  
Capture perfect 3D data of precision parts
- DYNAMIC REFERENCING TECHNOLOGY**  
Freely move parts or scanner without effect accuracy
- GOOD ADAPTABILITY**  
To easily scan shiny surface
- USER-FRIENDLY**  
Easy operation, can master the operation within half hour
- WIRELESS CONNECTION**  
Easy and flexible scanning of large parts

## TECHNICAL SPECIFICATIONS

MODEL	RigelScan Elite		RigelScan Plus	
SCAN MODE	Standard Mode	Fine Mode	Standard Mode	Fine Mode
MEASUREMENT RATE	650,000 measurements/s	450,000 measurements/s	1,350,000 measurements/s	450,000 measurements/s
SCANNING AREA	up to 600×550mm			
LIGHT SOURCE	14 blue laser lines + extra single blue laser line + extra 5 parallel blue laser lines		22 blue laser lines + extra single blue laser line + extra 5 parallel blue laser lines	
LASER CLASS	CLASS II (eye-safe)			
RESOLUTION	up to 0.02mm			
ACCURACY	up to 0.02mm	up to 0.01mm	up to 0.02mm	up to 0.01mm
VOLUMETRIC ACCURACY	0.02+0.035mm/m	—	0.02+0.035mm/m	—
VOLUMETRIC ACCURACY+PhotoShot	0.02+0.015mm/m	—	0.02+0.015mm/m	—
STAND-OFF DISTANCE	300mm	150mm	300mm	150mm
DEPTH OF FIELD	450mm	150mm	450mm	150mm
DEPTH OF FIELD @FURTHEST RANGE	550mm			
SUPER-REFERENCE (OPTIONAL)	support			
PORTABLE CMM (OPTIONAL)	support			
WEIGHT	1.0kg			
DIMENSIONS (LxWxH)	70×125×290mm			





AltairScan can efficiently capture the holes on surface of the parts, which can be widely used for quality control in automotive industry, aircraft fuselage and parts, molds as well as in other industries. AltairScan apply blue laser scanning technology for a fine scanning of structures. In the mean time, AltairScan can be equipped with wireless module, for more easy and flexible scanning experience of large parts. Thus, AltairScan provides the perfect 3D measurement solution for all industries.

# AltairScan Smart Flash Laser 3D Scanner

AltairScan Smart Flash Laser 3D Scanner series, is a revolutionary measurement system developed independently by ZG(international patent). AltairScan can extract hole center coordinates and diameter at an instant, certificated by National Institute of Metrology.

## FEATURES

HOLE FLASH CAPTURE TECHNOLOGY    GOOD ADAPTABILITY    ULTRA HIGH ACCURACY    FINE DETAIL SCANNING  
NON-CONTACT TECHNOLOGY

## MULTIPLE MIXED REFLECTION TECHNOLOGY

- Instantly obtain hole coordinate and diameter;
- Simultaneously capture surface mesh with circle boundary, to improve accuracy;
- Smart, simple and fast, reliable inspection result.



## TECHNICAL SPECIFICATIONS

MODEL	AltairScan Elite	
SCAN MODE	Standard Mode	Fine Mode
MEASUREMENT RATE	650,000 measurements/s	450,000 measurements/s
SCANNING AREA	up to 600×550mm	
LIGHT SOURCE	14 blue laser lines + extra single blue laser line + extra 5 parallel blue laser lines	
LASER CLASS	Class II (eye-safe)	
RESOLUTION	up to 0.02mm	
ACCURACY	up to 0.02mm	up to 0.01mm
VOLUMETRIC ACCURACY	0.02+0.035mm/m	—
VOLUMETRIC ACCURACY+PhotoShot	0.02+0.015mm/m	—
HOLE ACCURACY	up to 0.03mm	
HOLE VOLUMETRIC ACCURACY	0.03+0.035mm/m	
HOLE VOLUMETRIC ACCURACY +PhotoShot	0.03+0.015mm/m	
STAND-OFF DISTANCE	300mm	150mm
DEPTH OF FIELD	450mm	150mm
DEPTH OF FIELD @FURTHEST RANGE	550mm	
SUPER-REFERENCE (OPTIONAL)	support	
PORTABLE CMM (OPTIONAL)	support	
WEIGHT	1.0kg	
DIMENSIONS (LxWxH)	70×125×290mm	



# ZGScan Smart Handheld 3D Laser Scanner



ZGScan series Smart Handheld 3D Laser Scanner has independent intellectual property rights, granted with multiple national invention patents and certified by National Institute of Metrology, China. Besides, ZGScan is able to collect data for 3D inspection, reverse design, 3D printing and other areas which greatly meet the needs of R&D and Quality Control department.



## FEATURES

- HIGH ACCURACY**  
Up to 0.03mm
- HIGH EFFICIENCY**  
Fast scanning up to 480,000 measurements/s
- DYNAMIC REFERENCING TECHNOLOGY**  
Freely move parts or scanner without effect accuracy
- VISUALIZED OPERATION**  
PC displays realtime scanning data
- PORTABLE**  
Light weight 0.83kg, easily fit into the suitcase to travel
- USER- FRIENDLY**  
Easy to learn no matter user experience
- ERGONOMIC DESIGN**  
Offers wonderful user experience
- WIRELESS CONNECTION**  
Easy and flexible scanning of large parts

## TECHNICAL SPECIFICATIONS

MODEL	ZGScan 717
MEASUREMENT RATE	480,000 measurements/s
SCANNING AREA	up to 410×375mm
LIGHT SOURCE	14 red laser lines + extra 1 laser line
LASER CLASS	CLASS II (eye-safe)
RESOLUTION	up to 0.05mm
ACCURACY	up to 0.03mm
VOLUMETRIC ACCURACY	0.03+0.06mm/m
VOLUMETRIC ACCURACY+PhotoShot	0.03+0.015mm/m
STAND-OFF DISTANCE	300mm
DEPTH OF FIELD	250mm
SUPER-REFERENCE (OPTIONAL)	support
PORTABLE CMM (OPTIONAL)	NA
WEIGHT	0.83kg
DIMENSIONS (LxWxH)	80×147×310mm
CONNECTION STANDARD	USB 3.0
OPERATING TEMPERATURE	-20~40° C
OPERATING HUMIDITY (Non-Condensing)	10~90%
OUTPUT FORMATS	.asc, .stl, .obj, .ply, .txt, .xyz etc., customizable

COMPATIBLE SOFTWARE  
3D Systems(Geomagic Solutions), InnovMetric Software(PolyWorks), Dassault Systems (CATIA V5 and SolidWorks), PTC(Pro/ENGINEER), Autodesk(Inventor, Alias, 3ds Max, Maya, Softimage), Siemens(NX and Solid Edge) etc.

# HyperScan Smart Optical Tracking 3D Laser Scanner



## INTRODUCTION

HyperScan DX is the portable 3D scanner with portable CMM, which is the most complete solution available for metrology-grade scanning.



## ZG-Track OPTICAL TRACKER

Free of any strict measurement setups, provides measurement accuracy that is less sensitive to the changes found in work shop condition, even in the harshest environment.



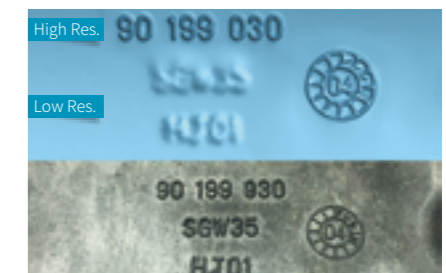
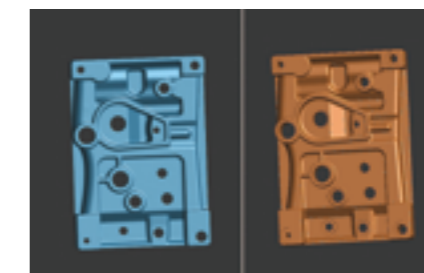
## ZG-Probe PORTABLE CMM

With unparalleled high precision, flexibility & adaptability, ZG-Probe is fully capable for quality control, reverse engineering and assembly analysis etc. Compared with the traditional CMM, ZG-Probe can work in different & complex environment outside laboratory for stable and accurate measurement.

## TECHNICAL FEATURES

- Binocular integrated carbon fiber structure;
- Dynamic measurement technology, less sensitive to vibration and noise in the workshop;
- Dual scanning mode, HyperScan DX supports Scanning with tracker by Self-Positioning System and Scanning without tracker by Markers-Positioning System;
- To provide a wireless portable CMM with ZG-Probe and get efficient and accurate GD&T.

## SOFTWARE FEATURES



### · Intelligent Guidance Module

Just one simple click the button, all the scanning parameter will be set automatically without any concerns.

### · 3D Measurement Module

Built-in measurement module supports various dimension and features measurements, also provide 3D comparison, data annotation and inspection report generation.

### · Mesh Data Optimization and Local Resolution Setting

Optimize mesh data in small file to save processing time and improve work efficiency, meanwhile to retain local fine details with high resolution.





## TECHNICAL SPECIFICATIONS



MODEL	HyperScan DX		
MEASUREMENT RATE	1,340,000 measurements/s		
SCANNING AREA	up to 550×500mm		
LIGHT SOURCE	26 laser lines + 1 extra line for hard reach area		
LASER CLASS	Class II (eye-safe)		
RESOLUTION	up to 0.02mm		
ACCURACY	up to 0.025mm		
VOLUMETRIC ACCURACY 9.6m <sup>3</sup>	0.064mm		
VOLUMETRIC ACCURACY 17.6m <sup>3</sup>	0.078mm		
VOLUMETRIC ACCURACY+PhotoShot	0.044mm+0.015mm/m		
STAND-OFF DISTANCE	350mm		
DEPTH OF FIELD	400mm		
MARKERS POSITIONING SYSTEM(WITHOUT TRACKER)	VOLUMETRIC ACCURACY	0.02mm+0.035mm/m	
	VOLUMETRIC ACCURACY +PhotoShot	0.02mm+0.015mm/m	
WEIGHT	1.5kg		

## ZG-Probe PORTABLE CMM

MODEL	ZG-Probe		
SINGLE POINT REPEATABILITY 9.6m <sup>3</sup>	0.044mm	VOLUMETRIC ACCURACY 9.6m <sup>3</sup>	0.064mm
SINGLE POINT REPEATABILITY 17.6m <sup>3</sup>	0.058mm	VOLUMETRIC ACCURACY 17.6m <sup>3</sup>	0.078mm
ACCURACY	up to 0.03mm	MEASUREMENT RATE	90 measurements/s
VOLUMETRIC ACCURACY +PhotoShot	0.044mm+0.015mm/m	OPERATING TEMPERATURE	-20~40°C



- > High-resolution digital camera
- > Carbon fiber calibrated scale bar with aviation grade
- > Encoding targets
- > Positioning target points
- > PhotoShot intelligent software

## PhotoShot Smart 3D Photogrammetric System

As the portable large scale measuring equipment which is independently developed by ZG Technology, it can always retain the ultra-high measurement accuracy of 0.015mm/m within the range of 1~20m, it's the best choice for product quality department to conduct coordinate measurement and analysis of large workpieces. Based on the powerful calculation capacity of the software, PhotoShot photogrammetric system is compatible with mainstream digital cameras on the market and can be used for on-site geometrical measurement in the workshop in the simplest and most portable way, which can greatly reduce the equipment cost and the operators's learning time of new machines. In addition, with it's incomparable stability, PhotoShot system can effectively avoid technicians' personal errors, reduce rework time and further improve the efficiency of the enterprise.

## TECHNICAL SPECIFICATIONS

MODEL	PhotoShot
SCANNING AREA	1~20m
VOLUMETRIC ACCURACY	0.015mm/m
AVERAGE DEVIATION	0.008mm/m
OPERATING TEMPERATURE	-20~40 °C
OPERATING HUMIDITY (Non-Condensing)	10~90%

# AutoMetric Smart Inline Inspection System

## INTRODUCTION

AutoMetric Smart Inline Inspection system is designed for automated inspection, which combines 3D scanning, robust measurement, control and smart inspection software to edge out traditional labor work by robust automated production. Automated quality inspection can be realized without any labor involvement, which dramatically improves customer automated and intelligent production. AutoMetric Smart Inline Inspection System is optimal choice for cutting-edge smart manufacturing, which helps customer integrate measurement into automation in production line directly to improve control quality efficiently with minimal production cost.

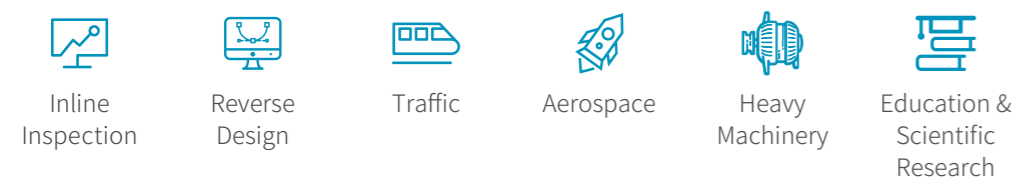
## ADVANTAGES

- Fully automated without manpower involvement from robot startup to measurement report.
- Suitable for both gantry and robust 3D inspection, stand alone with robot accuracy, modular integration, customized robot.
- Quick scanning route design by stimulating human motion, easy to use.
- Data management report can deliver size measurement results, historical data charts and process performance report.
- The influence of complex factors such as workshop vibration can be ignored.

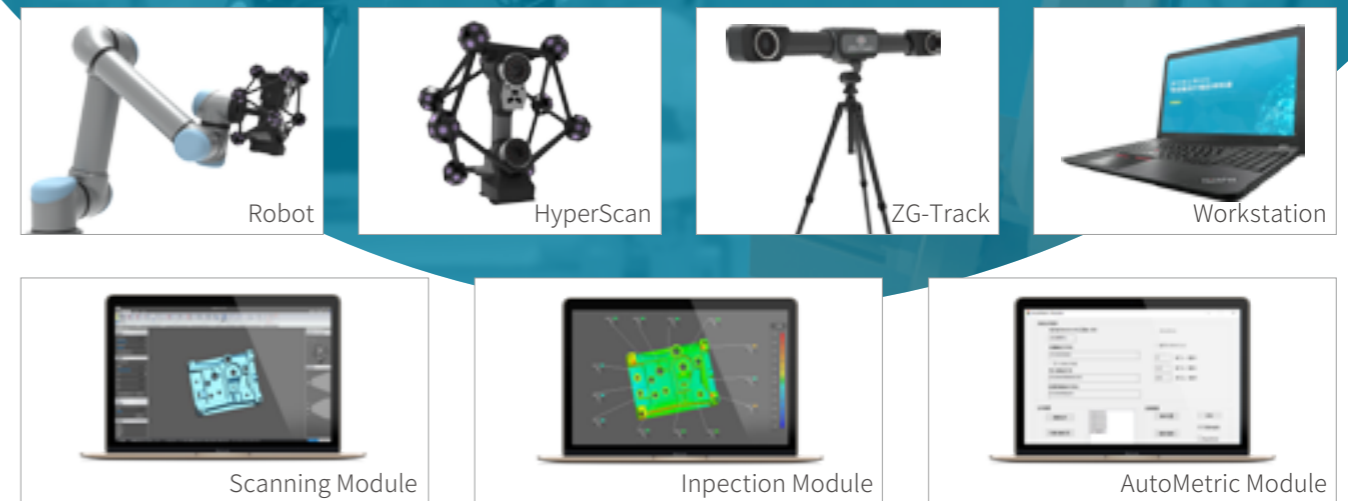
## AUTOMATED INSPECTION



## APPLICATIONS



## SYSTEM COMPOSITION



## TECHNICAL SPECIFICATIONS

MODEL	AutoMetric
CONNECTION STANDARD	Network, USB, etc.
EXTENSIBLE ITEMS	Supply external IO control based on customer's requirement, etc.
CUSTOMIZABLE ITEMS	Robot type, Test Item, Test report, etc.
SYSTEM POWER SUPPLY	AC220V
OPERATING TEMPERATURE	-20~40°C
OPERATING HUMIDITY	10~90%
SYSTEM COMPOSITION	Robot, HyperScan, ZG-Track, Workstation
SOFTWARE PACKAGE	Scanning module, Inspection module, AutoMetric module

\* Please refer to ZG HyperScan Smart Optical Tracking 3D Scanner for specific specifications





# GScan Smart Full-color 3D Scanner






## INTRODUCTION

GScan is a new multi-functional handheld 3D scanner (white light) developed independently by ZG Technology Co., Ltd. Quick acquisition of the object 3D data, smart, portable, high accuracy, all make GScan a true non-contact measurement solution; No need of positioning targets, intelligent guidance operation. Lightweight, easy to carry, easy operation, multi-function scanning to meet different requirements.

## FEATURES

- REALISTIC COLOR**  
High color reproduction
- PORTABLE**  
Total weight 0.56kg, easy to carry
- USER-FRIENDLY**  
Easy operation, 10 minutes to master the operation
- MULTI-FUNCTION SCANNING**  
Handheld or fixed scanning modes
- FAST SCANNING RATE**  
550,000 measurements/s  
Quickly acquire 3D data
- VISUALIZED OPERATION**  
PC displays real-time scanning data

## APPLICATIONS

-   
3D Printing
-   
Museology and Furnishings
-   
Human Body Scanning
-   
Artistic Design
-   
Medical and Healthcare

## TECHNICAL SPECIFICATIONS



SCAN MODE	HAND-HELD	FIXED
PROJECTION MODE	Speckle/Stripe Projection	Grating Stripe Projection
ACCURACY	up to 0.1mm	up to 0.05mm
VOLUMETRIC ACCURACY	0.3mm/m	not applicable
MEASUREMENT RATE	550,000 measurements/s	single scan<2s
RESOLUTION	up to 0.5mm	0.2mm
RECOMMENDED OBJECT SIZE	0.15~4.00m	0.03~0.25m
POSITIONING METHOD	geometry, targets, combined	turntable positioning, geometry, targets
STAND-OFF DISTANCE	400mm	
DEPTH OF FIELD	200mm	
SINGLE SCANNING AREA	250×185mm	
LIGHT SOURCE	white light(LED)	
TEXTURE MAPPING ACCURACY	1 pixel	
OPERATION SYSTEM	Win7 (64bit) 、 Win10 (64bit)	
WEIGHT	0.56kg	
DIMENSIONS (LxWxH)	50×130×280mm	
CONNECTION STANDARD	USB 3.0	
OPERATING TEMPERATURE	-20~40° C	
OPERATING HUMIDITY (non-condensing)	10~90%	
OUTPUT FORMATS	.stl, .obj, .wrl, .ply, .txt, .xyz, .asc etc., customizable	
COMPATIBLE SOFTWARE	3D Systems (Geomagic Solutions), InnovMetric Softwre (PolyWorks) Dassault Systems (CATIV V5 and SolidWorks), PTC (PRO/ENGINEER) Autodesk (Inventor, Alias, 3ds Max, Maya, Softimage), Siemens (NX and Solid Edge) etc.	

# APPLICATION CASE



## AEROSPACE

rapid prototyping, quality control/inspection, (MRO) wear and tear analysis, aerodynamics, stress analysis, OEM and parts recycling, reverse engineering



## AUTOMOTIVE

reverse engineering, competitive product analysis, automotive repacking, interior customization, modeling and design, finite element analysis(FEA)



## CASTING PARTS

rough part quality control and inspection, machining processing design



## CULTURAL

cultural relic  
art  
sculpture



## HEAVY INDUSTRY

quality control, reverse engineering  
MRO and wear analysis, mechanical/tooling design and modification, OEM and parts recycling, tooling and mold modification



## MOLD

virtual assembly, reverse engineering, quality control, wear and tear analysis, custom repairs and modification



## CONSUMABLE

modeling and design  
inspection, reverse engineering, tooling design, VR&AR



## MEDICAL

orthosis/prosthesis design and manufacture,  
wound monitoring, biological specimen

More Applications: [Education](#) | [Industrial Design](#) | [Museology](#) | [VR·AR](#)

For more information please get from ZG official web: [www.zg-3d.com](http://www.zg-3d.com)