

# OptimScan-5M Plus

High-Precision 3D Inspection System

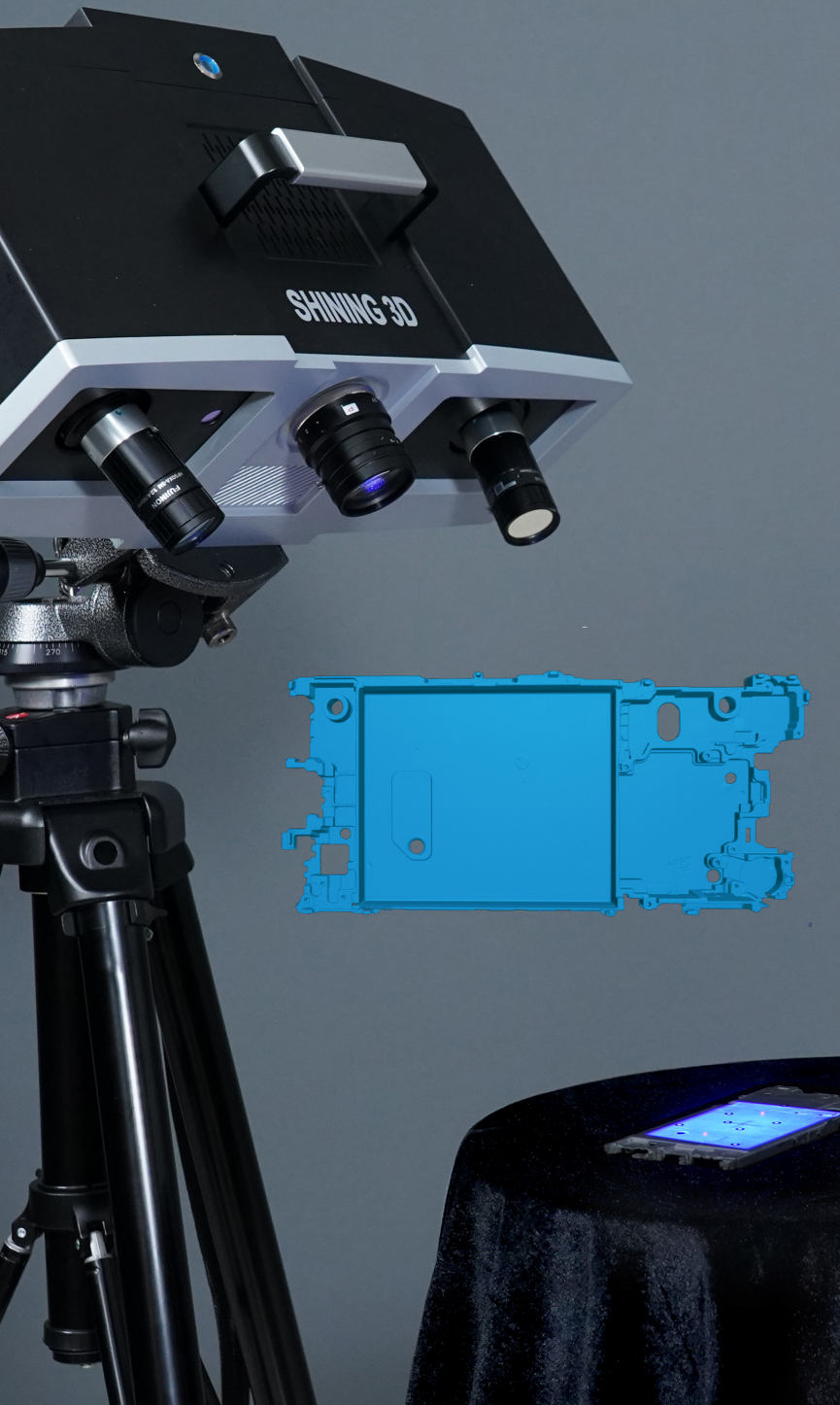




## OptiScan-5M Plus

OptiScan-5M Plus is high-precision 3D inspection scanner with narrow-band blue light source and upgraded high-resolution industrial lens, it provides better detail performance in scanning and smoother data quality. Three sets of high-resolution industrial lenses are used according to different size object, making it more flexible and adaptable. It is widely applied in reverse engineering, quality inspection and quality control.





# Product Features



## High Resolution

Three sets of 5 megapixel high resolution cameras and 1080P projection are used to obtain high precision features.



## High Accuracy

Single shot accuracy can reach up to 0.005mm, scanner provides the function of environmental vibration detection and effectively ensure high quality data and precision.



## Multiple Scan Range

The system realizes different scanning range by switching of different lenses to ensure a finer scanning performance.



## HDR Function

The HDR function helps to scan high contrasted objects like black and white objects to get complete data.

# Data Presentation



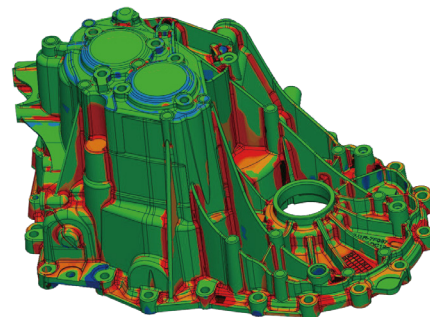
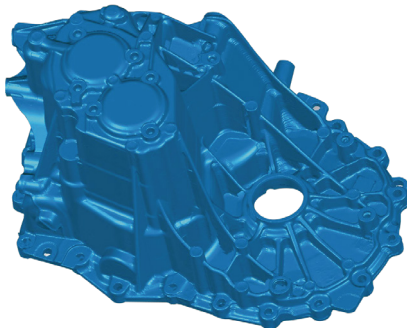
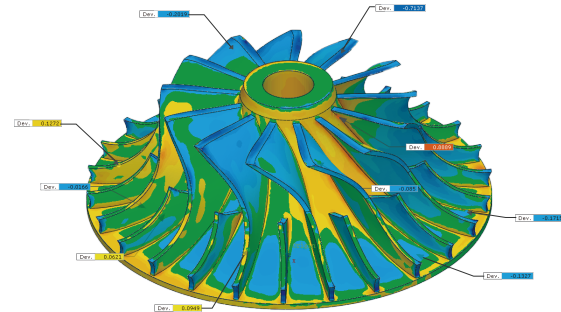
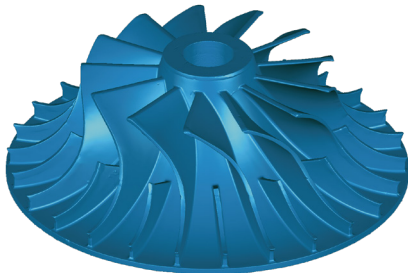
## One-click Integration Module Function

The system integrates the "one-click" automatic markers alignment module and the GREC global deviation control module, which effectively reduces alignment errors and get high-quality data with high precision.



## Compatible with Mainstream Software

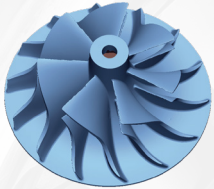
Support multiple data formats  
Support mainstream reverse design or 3D inspection software





# Workflow with Third-party Softwares

## 3D Inspection Process



### Import Data

Support a variety of data model formats, compatible with data captured by various mainstream scanner and CAD digital data of various mainstream design software.



### Alignment Compare

The RPS reference positioning system and the reference alignment function achieve high-precision automatic alignment. It can effectively ensure the accuracy of deviation analysis. Multiple deviation analysis functions can be used to meet the different needs.



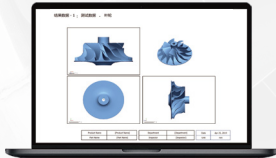
### Measurement Evaluation

it supports dimensions of ASMEY14.5GD&T tolerance and geometric. The software can also automatically calculate the deviation between reference and actual value, and get the accurate calculation result.



### Generate Report

Automatically generate inspection reports based on predefined templates. Analysis images and calculation results can be quickly exported. it improves inspection efficiency



## Reverse Engineering Process



### Data Processing

Data processing method like align, optimize, merge, holes fill, simplify, and smooth can obtain high-quality triangular mesh models.



### Feature Extraction

Automatically classify the mesh into different colored geometric regions based on curvature and features of the scan data, extract design parameters, and automatically create sketch profiles.



### Exact Fit

Mesh-based fitting algorithms create NURBUS surfaces, easily and quickly creating 3D free-form bodies from free-form shapes of meshes.



### CAD Conversion

Create CAD features, hybrid solid and surface models from scan data, it covers different objects to ensure model accuracy.



# Technical specifications

Product type	5M Plus-400	5M Plus-200	5M Plus-100
Single scan range	400 mm x 300 mm	200 mm x 150 mm	100 mm x 75 mm
single shot accuracy	0.015 mm	0.01 mm	0.005 mm
Point distance	0.16 mm	0.08 mm	0.04 mm
Working distance	560 mm		
Camera Resolution	5.0 MPx2		
Light source	Blue light ( LED )		
Scan speed	≤1.5 s		
Scan method	non-contact structure light scanning		
Output Data Format	.asc、.stl、.obj、 etc., and compatible with the mainstream 3D software		
Working temperature	0° C ~ 40° C		
Working humidity	10% RH ~ 90% RH		
Scanner weight	6.8 kg		
Size	435 mm x 300 mm x 200 mm		
Recommended computer configuration	Graphics card: NVIDIA GTX 1080 or above; Video memory: ≥4 G; Processor: above i7 8700; Memory: ≥32 GB; Port: USB 3.0		

\*Also compatible with all major metrology, CAD, and computer graphic software through mesh and point cloud import.

OptimScan-5M Plus-EN 20230704-V0.8