

3D  
CAD  
CAM  
Technology



SHINING 3D®

# OptimScan-5M Plus

High-Precision 3D Inspection system





## OptiScan-5M Plus

OptiScan-5M Plus is the 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 provided according to different size objects, making it more flexible and adaptable. It is widely applied in reverse engineering, quality inspection and quality control.



## Product features



### High resolution

Optim 5M Plus uses high-resolution, high-speed and high-precision digital blue light projection module, the light source has strong anti-interference and can effectively avoid the impact of the external environment. It can be applied in a wider range.



### High accuracy

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



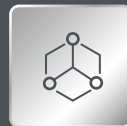
### Multiple scan range

The system realizes the switching of the scanning range with different focal lens to ensure a finer scanning performance. Different scanning ranges have the same working distance without manual adjustment.



## parameters automatically adjust

The exposure and the brightness of the raster machine can be automatically adjusted in scanning, which greatly improves the scan performance for reflective objects.

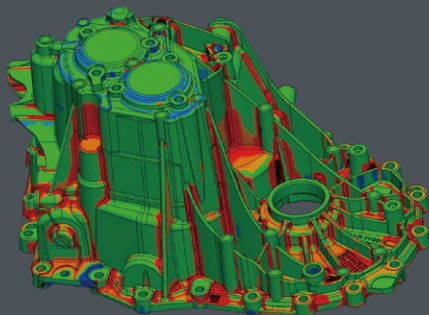
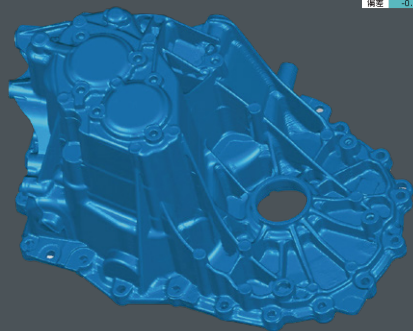
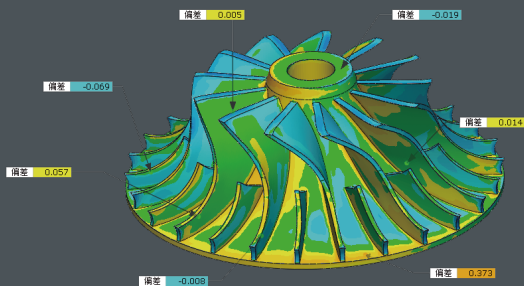
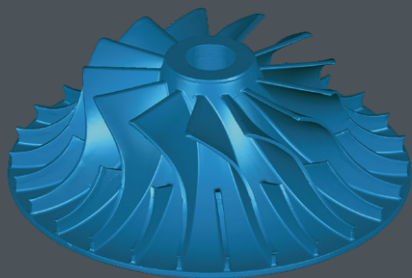


## One-click integration module function

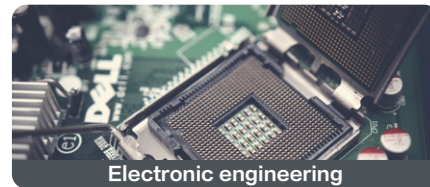
The system integrates the "one-click" automatic markers alignment module and the GREC global deviation control module, which effectively reduces alignment errors and get high-quality data with high precision.



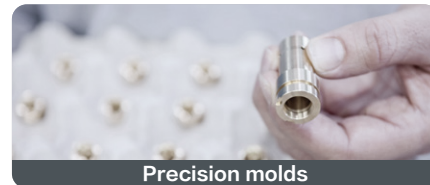
# Data presentation



# Applications



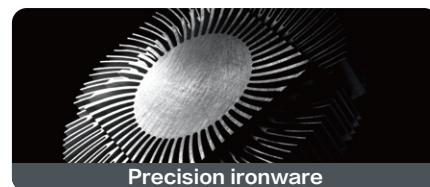
Electronic engineering



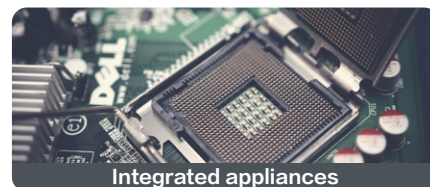
Precision molds



Injection plastic



Precision ironware



Integrated appliances



Medical instruments

# 3D inspection process

# Reverse engineering 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.



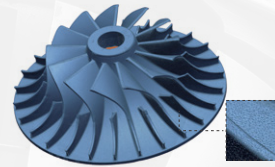
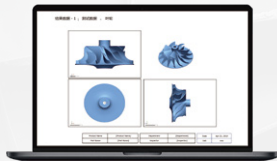
## Measurement evaluation

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



## 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.



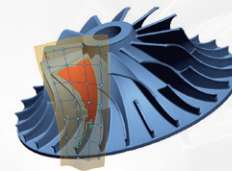
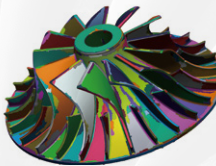
## exact fit

Mesh-based fitting algorithms create NURBS 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.



## PTB certification

It has a high-precision discrete data fitting algorithm, and has obtained the accuracy certification of Physikalisch-Technische Bundesanstalt (PTB).



## Compatible with mainstream software

support Multiple data formats  
Support mainstream reverse design or 3D inspection software

# 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	OS: Win7/Win10, 64 bit; Graphics card: NVIDIA Quadro series cards; Video memory: ≥1 G; Processor: above i7 3770; Memory: ≥32 GB DDR3 1600		

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