SHINING 3D®

OptimScan-5M Plus

High-Precision 3D Inspection system

OptimScan-5M Plus

OptimScan-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.

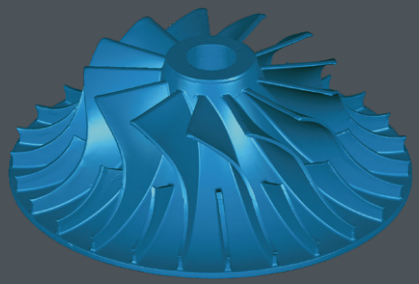
parameters automatically adjust

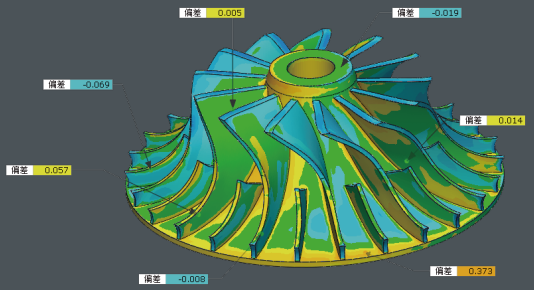
The exposure and the brightness of the raster machine can be automatically adjusted in scanning, which greatly improves the scan performance for reflective objects.

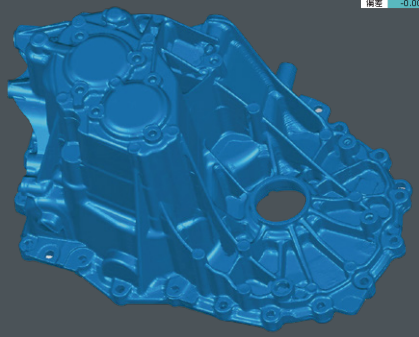
One-click integration module function

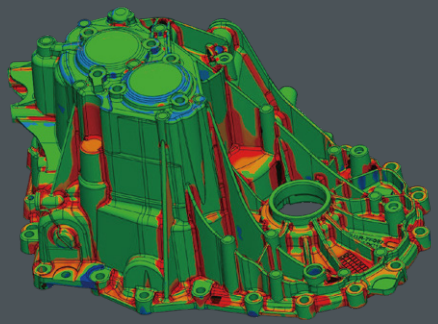
The system integrates the "one-click" automatic markers alignment module and the GREC global deviation control module, which effectively reduces alignment errors and get high-quality data with high precision.

Data presentation

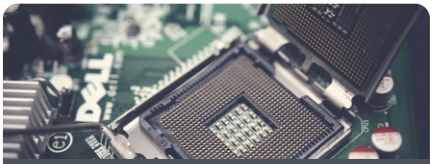


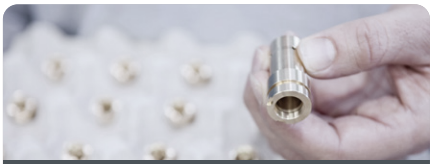




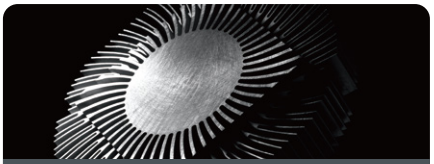


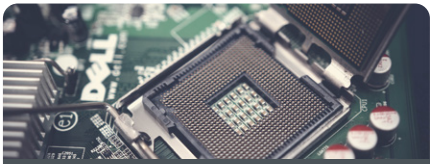
Applications

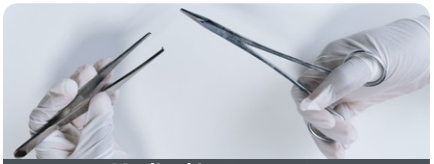

Electronic engineering


Precision molds


Injection plastic


Precision ironware

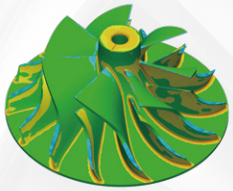

Integrated appliances


Medical instruments

3D inspection process

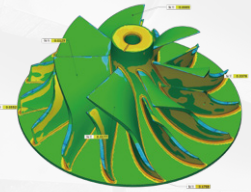
Import Data

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



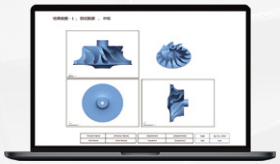
alignment compare

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.



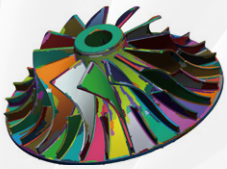
generate report

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

Reverse engineering process

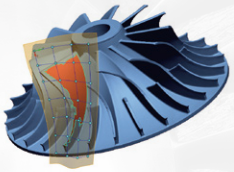
data processing

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.

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		

版本号：OptimScan-5M Plus-EN 20220624-V0.3