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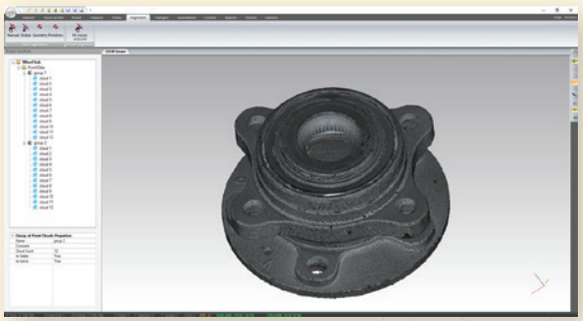
SMARTTECH3D

MICRON3D GREEN STEREO

3D Scanners for Industry and Quality Control

The MICRON3D Green Stereo is SMARTTECH's most precise 3D scanner, designed for industrial applications. It meets the needs of modern enterprises that value advanced, Industry 4.0-ready technology. With verified metrological accuracy and high-performance specifications, it is an ideal tool for quality control and reverse engineering.

This model uses a green LED light with a wavelength of 500 nm to ensure stable and reliable measurements. Narrowband filters minimize the impact of external lighting, while high-quality monochromatic detectors used for stereoscopic measurement reduce noise. Dual-direction fringe projection further increases precision, allowing for a highly accurate digital representation of sharp edges and complex surfaces.



MICRON3D GREEN STEREO FEATURES:

- Stereoscopic measurement with two detectors
- Dual Direction Stripes (DDS) measurement method
- Heat-resistant carbon fiber housing and construction
- Increased measurement accuracy and extended system lifespan using green LED light
- Enhanced surface and edge reconstruction
- Precise quality control through scan-to-CAD comparison

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TECHNICAL SPECIFICATIONS

Resolution	6-6 MP			
Scanning Technology	Structural green LED light			
Measuring field* [mm2]	200x133	300x200	400x266	600x400
Measuring depth* [mm]	60	120	180	240
Sampling* [pts/mm ^{2}]	230	100	60	25
Accuracy[µm]	18	22	33	48

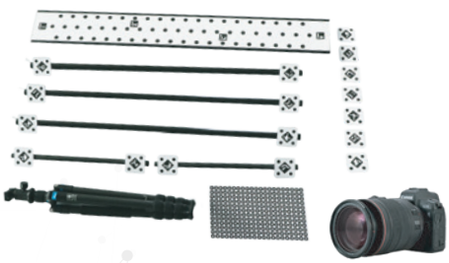
Resolution	12-12 MP			
Scanning Technology	Structural green LED light			
Measuring field* [mm2]	200x150	300x225	400x300	600x455
Measuring depth* [mm]	60	120	180	240
Sampling* [pts/mm ^{2}]	402	178	100	45
Accuracy[µm]	18	22	33	48

Resolution	20-20 MP			
Scanning Technology	Structural green LED light			
Measuring field* [mm2]	200x135	300x200	400x260	600x400
Measuring depth* [mm]	60	120	180	240
Sampling* [pts/mm ^{2}]	755	335	189	84
Accuracy[µm]	18	22	33	48

* +/- 10% value

ADDITIONAL ACCESSORIES

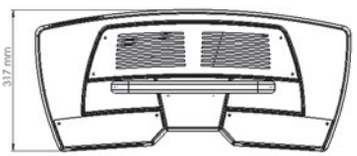
Easy & fast change of measurement volume with exchangeable lenses

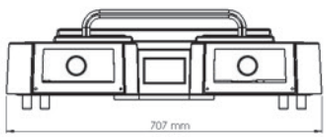


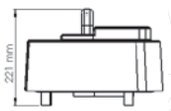
Photogrammetry set for measurement large objects

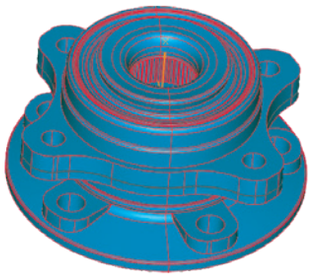
Touch probe

Automatic Rotary Stage:
- max load 15kg, diameter 200mm
- max load 80kg, diameter 500mm
- max load 300kg, diameter 500mm

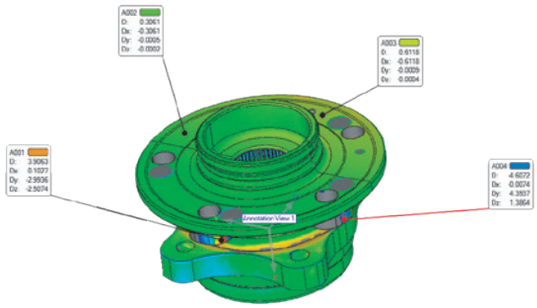






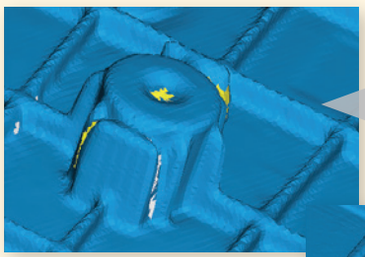


The MICRON3D Green Stereo offers accuracy of 17 micrometers, confirmed through field tests by SMARTTECH experts and independent laboratories. Designed for reliable performance and mobility, the scanner features a temperature-resistant carbon fiber housing and load-bearing structure. Specialized construction minimizes external vibrations, while an exchangeable dustproof filter protects internal components. These features make the MICRON3D Green Stereo suitable for both laboratory and production line use.

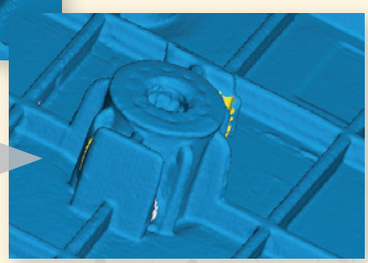


The MICRON3D Green Stereo is available in three standard resolutions: 2×6 MP, 2×12 MP, and 2×20 MP, providing flexibility for applications that require varying levels of detail. The system can also be equipped with exchangeable lenses, allowing users to adjust the scanning volume to match different object sizes and levels of complexity.

The MICRON3D Green Stereo 20–20 MP is the highest-resolution model in the series. It delivers 20-megapixel measurement capability, enabling the capture of extremely fine details, even when features are smaller than 1 mm. The high resolution improves efficiency when scanning large, complex objects and allows for full automation of the scanning process. A single scan with a 420 × 300 mm field of view captures the same level of detail as four scans taken with a 6 MP system covering 150 × 105 mm. This capability supports detailed quality control of both large and small parts without hardware modifications, optimizing scan time across varied component sizes.



Triangle mesh from a 3D scanner with a resolution of 6 MP (Field of view 480x350 mm)



Triangle mesh from a 3D scanner with a resolution of 20 MP (Field of view 480x350 mm)

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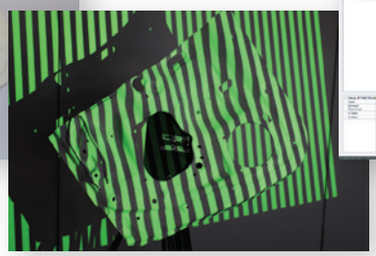
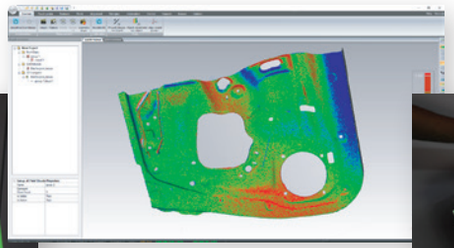
MICRON3D Green Stereo scanners operate with SMARTTECH3Dmeasure software, which provides tools for automated scanning, advanced data editing, and quality control. The integrated system allows users to complete the entire digitization process from the initial scan to a finished 3D model or control report in PDF format. Optimized data management algorithms enable smooth operation with large point clouds of more than 300 million points on standard laptops. Adjustable projection intensity and measurement parameters make it possible to scan dark or glossy surfaces with reliable accuracy.

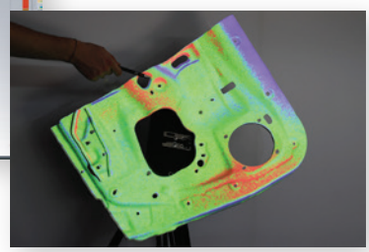
A part for Quality Control



3D Scanning



Quality Control in the SMARTTECH3Dmeasure program

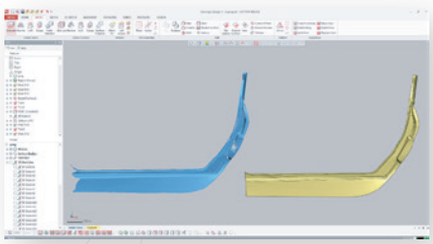


Color deviation map displayed on the object

MEASURE, CONTROL, AND VISUALIZE DIRECTLY ON THE OBJECT

In keeping with SMARTTECH's approach to providing complete measurement solutions, the software includes essential tools for quality control. SMARTTECH3Dmeasure enables users to perform segment and point-to-point measurements, calculate surface area and volume, and generate color deviation maps comparing scans to reference models. The system can also project color deviation maps directly onto physical objects, allowing users to visualize inspection results and identify areas that require repair or adjustment.

The MICRON3D Green Stereo is a professional, factory-calibrated metrology tool certified by the manufacturer in accordance with the German VDI/VDE 2634 standard. Its measurement accuracy can also be verified by an independent accredited metrology laboratory.



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