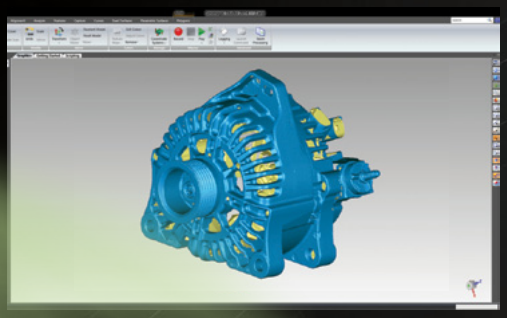
NEW !

MICRON3D

3D SCANNER FOR SPECIAL APPLICATIONS

SMARTTECH 3D
Optical measurement systems

Housing as well as supporting structure was made of modern and solid carbon fiber. It increased strength of device's construction and minimalized the influence of temperature fluctuations on scanners accuracy



Gold Medal
CONTROL-TECH FAIRS 2014

GREEN LED light
technology

Work on this product took over two years, what allowed us to refine the smallest details of this 3D scanner. Hard working team of engineers, based on questionnaire among over 200 previous customers, elaborated basic assumptions of the new generation 3D scanner. As an, effect they invented brand new technology of optical 3D scanner with narrowband green structural light.

This discovery consists of projecting the green stripes on scanned objects. Digital reflection is counted upon sequences of the stripes curvature.

This new technology allows not only to measure in difficult lighting conditions but, above all, comparing to another, already existing scanners; increased the accuracy of whole measurement, furthermore LED light technology downgraded energy consumption and increased the vitality of whole device.

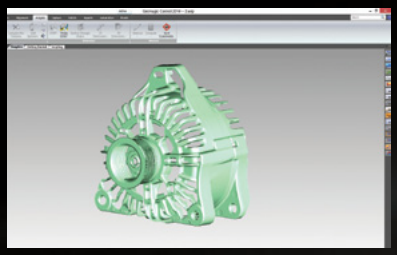
Micron3D was made by SMARTTECH engineers to assure reliable scanning and full mobility. Housing as well as supporting structure was made of modern and solid carbon fiber. It increased strength of device's construction and minimalized the influence of temperature fluctuations on scanners accuracy. Additionally: implemented the internal shock absorbing system and changeable dustproof filters protects sensitive interior of 3D scanner.

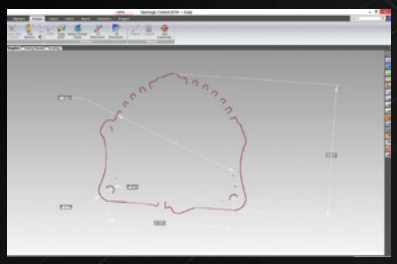
As a professional calibrated by manufacturer, measurement device – micron3D has a certificate of accuracy that can be additionally approved by independent measurement laboratory. Scanner is calibrated according to German norm VDI/VDE 2634 part 2.

All features of innovate 3D scanner were awarded on CONTROL-TECH Kielce fairs where micron3D gained golden medal as the best product shown on fairs, furthermore it's innovation was appreciated by the Main Technical Organization and awarded by "Laurel of Innovation 2014".

Advantages:

1.NEW innovate technology of 3D scanning with green LED light
2. Ease and accurate objects reflection
3. Possibility to change measurement volume and end-user recalibration.
4. Fast contactless measurement – 1 sec.
5. Highest possible density – over 1000 points on one square millimeter.
6. Modern, dustproof carbon cover
7. Automate single scans merging using markers, 3 point method or rotary table.
8. Universal file data extension : IGES, DXF,PLY,STL,VRML,OBJ
9 High accuracy (up to 0,007mm) approved by independent measurement laboratory.
10. “Plug & Scan” system – without need of recalibration.



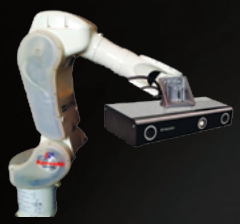


Application:

- Reverse engineering – this technique is based creating digital documentation of existing objects without need of modeling in specialist or graphic software. 3D scanning in comparison to traditional methods have two main advantages:
  - It eliminates human mistakes so virtual object is exactly the same as in reality.
  - It is definitely much faster
- Quality control – full and accurate control of produced object geometry.
- Already existing objects modification – Thanks to 3D scanning we can modify just necessary part.
- Producing parts based on already existing matched elements. Designing new parts using 3D scanning of target place like for eg. overlays to the thresholds, decoration as well as bio medical components like artificial joints made based on acetabulum.
- Creating CAD and production data of real objects.
- Virtual matching and simulations.
- Digitizing objects for entertainment like computer games, marketing or presentations.
- Non-invading researches of elements like: strength calculation museum relics analyze; volume counting, timeline changes and cross-sections

Additional accessories:

Column stand



Measuring robot

Automatic rotate table

Specification technical	5 Mpix	10 Mpix
Scanning technology	Structural Green LED light	Structural Green LED light
Detector resolution	5 Mpix	10 Mpix
Field measurement [mm2]	150x200 do 600x800	150x200 do 1200x1600
Distance between point [mm]	0,07 - 0,30	0,05 - 0,40
Sampling [pts/mm2]	170 - 10	300 - 5
The accuracy of [um]	dep. on meas vol. 18- 70	dep. on meas vol. 18 - 280
Tripod, flying case	+	+
Texture scanning	option	option
Mobile work station	+	+

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