

New!

**SMARTTECH 3D**  
Optical measurement systems

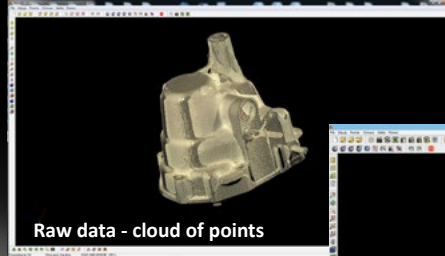
# SCAN3D UNIVERSE

Universal, mobile 3D scanner: connecting precise geometry measurement with real color capture of scanned object. The perfect tool for both innovative engineer, designer as well as archeologist.



3D scanning of gearbox cover for CAD documentation

**WHITE LED light  
technology**



Raw data - cloud of points



STL model - triangular mesh

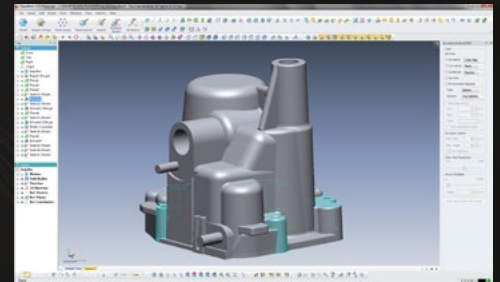


Gold Medal  
CONTROL-TECH FAIRS 2013

## The right tool for reverse engineering and 3D printing...

This universal 3D scanner is a tool dedicated to enter 3D world both for metrologically proven technical measurements as well as for national heritage measurements where color of the object is a crucial information.

Scan3D UNIVERSE was created for mobility, comfort and ease of use keeping in mind that the 3D scanner should be reliable optical measurement device. This small "plug&scan" device fits easily in your hand luggage together with compact small rotary stage which allows automation of measurement process. On the other hand the device enables automated scanning of large size objects based on markers detecting function, this way it gives user possibility to easily scan objects from 20 mm up to 3 m.



Parametric CAD model created based on 3D scan



The system works in two resolution modes what allows user to optimize data volume while scanning big objects, and enhance the probing resolution for highly detailed parts such as threads or mounting holes.

Scanner scan3D UNIVERSE is complete hardware-software solution for obtaining 3D documentation of physical object for further both digital and real life processing such as: quality control or 3D printing. No needed to perform calibration and given certificate of accuracy of our device, makes this 3D scanner a referential measurement tool for technical and natural trades.

Possibility to integrate our 3D scanner with high-end software for reverse engineering allows automatic data processing from a cloud of points, through mesh into parametric CAD model and also for fast quality control.

Special combo offer with software:



**Geomagic**

Looking for international distributors

[www.smarttech3D.com](http://www.smarttech3D.com)

# ... and for national heritage digitization and documentation

scan3D UNIVERSE allows contactless measurement and documentation of valuable museum and architectural objects. The scanner uses white LED light source technology what is additional guarantee of non-invasive measurement.

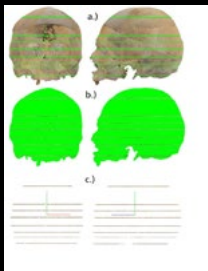
During 3D scanning process user obtains information about object's geometry (XYZ coordinates) and realistic representation of texture in every measured point (RGB in each XYZ point). High quality and high resolution of color detectors used in the device assures that measurement is made with high precision and even the small details, such as shape of the brush strokes can be seen clearly.

Dedicated measurement and post processing software integrated with scan3D UNIVERSE is a complex solution which enables end user to prepare 3D documentation process and perform virtual research such as cuts or modeling of missed parts of the scanned object. Multiple export formats as well as: standard raw data format allows the data to be used in all popular CAD or 3D graphical software such as: Maya, ZBrush or 3Dmax. User can easily share the results with other researchers thanks to a free SMARTTECH3Dmeasure Viewer software.

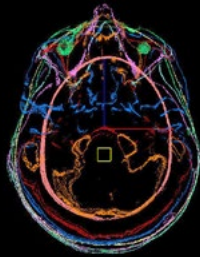
Revolutionary small size of the device and convenient transport casing allows easy transport of the 3D scanner. Standard scanner set includes light tripod and additional wheeling base to make your work easier no matter where you take it.

Scan3D UNIVERSE is the device developed for:

- 3D digitization of archeology objects,
- 3D archivization of geometry and texture (color) of precious museum objects,
- creating digital passport for national heritage objects,
- making a virtual research e.g. comparison of object in time, volume calculations,
- creating input for virtual museums,
- 3D printing of art copies for education and helping disabled such as blind people to study art.



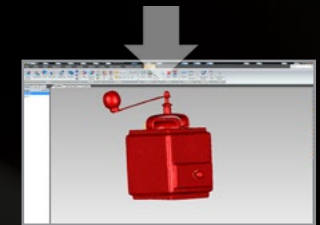
Virtual research from 3D scanners data (human skull)



3D dimensioning



Raw scanned data - cloud of points with texture (XYZ,RGB)



Triangular mesh - detailed shape of the object

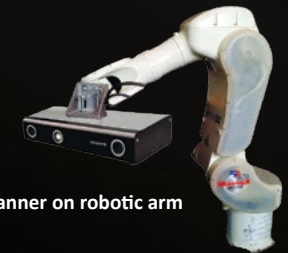


Triangular mesh with texture - ready for web (virtual museum)

## Technical specification:

Detector resolution	5 MPix			1,3 MPix
	Structured LED light			Structured LED light
Scanning technology	Structured LED light			Structured LED light
Field measurement [mm <sup>3</sup> ]	150x200x120	200x300x210	300x400x300	200x300x210
Accuracy [µm]	50	60	70	55
Distance between points [mm]	0,07	0,11	0,15	0,23
Sampling [point/mm <sup>2</sup> ]	164	73	41	18
No. of points from single scan [pts]	5 000 000			1 300 000
Working distance [mm]	320	480	540	500

## Additional accessories:



Scanner on robotic arm



Automatic rotary stage

