

ScanBright archeo

3D Scanner for Heritage Preservation

SMARTTECH 3D
Optical measurement systems

ScanBright archeo 3D scanner - is a complex solution providing professional digitalization of museum objects for various applications-starting with simple visualization for virtual museum creation up to precise archivization process.



New! Integrated with shadowless lighting system



Accuracy certificate

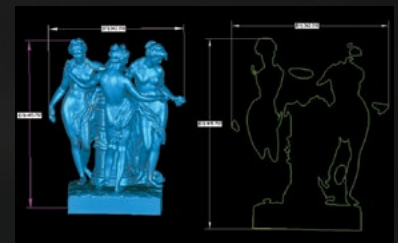
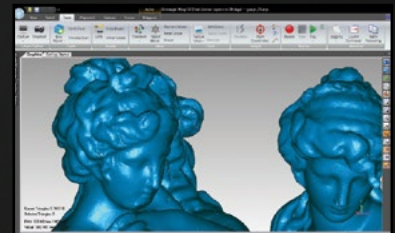
ScanBright archeo has been designed for professional digitalization of fragile and precious museum objects according to Recommendation for planning and conducting digitalization of museum objects. Thanks to wide cooperation with many museum institution, ScanBright archeo meets highest requirement of measurements and also provides realistic models for virtual museums and 3D printing.

Scan accuracy up to 50 μm and high point cloud density (to 400 points/ mm^2) provides precise geometry representation and enables 3D archivary or virtual research based on scanning. The use of high class detector with real color image and high resolution (10 MPix) gives you the possibility to visualize the smallest changes and appreciate the artist finesses in every detail.

SAFETY GUARANTEED - White light 3D scanning technology uses only white spectrum of light which guarantees user full safety of precious models.

EAS OF USE - Each 3D scanner is delivered and installed at the clients site and together with mobile workstation and software is instantly ready for use. To make sure your measurement is precise ScanBright archeo is calibrated on production site and checked according to VDI/VDE 2634. Professional transport cases and specialized ISA module (Internal Shock Absorber) integrated in scanner head casing ensure that no end user calibration is needed.

3D SCANNER DESIGNED FOR NATIONAL HERITAGE PRESERVATION - Over decade of experience in 3D scanner production and museum heritage measurement gave us opportunity to adjust scanning process for museology needs offer precise rotate table to automate measurement. As an additional features we advanced light markers for automatic scan merging (no need for physical markers) and specialized application for automated periodic measurement for damage assessment. We provide professional service, technical help and complex training in 3D scanning and data post processing.



The national heritage is passed on to next generations in many ways among them are image and shape. The contactless measurement allows for the retention of the form and colour of a valuable museum or archaeological object in the digital form. It also allows us to conduct research without the risk of damage and regardless of the placing of the relict.

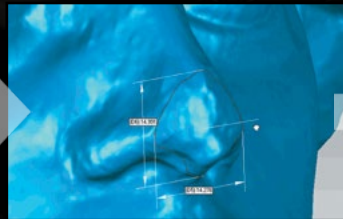


REFERENCES. The 3D scanning system ScanBright archeo has been implemented in many renown cultural institutions and museums. All of these places required the system to pass the most rigorous safety standards so as not to endanger the exhibit pieces and to generate data of the highest quality and precision. Due to our experience and professional approach, we were entrusted with providing solutions for 3D scanning to institutions such as: the Digital Humanities Laboratory at the University of Warsaw, The Małopolska's Virtual Museums (Cracow), the Department of Archaeology at Ghent University, the Museum of King John III's Palace at Wilanów (Warsaw), or the Archaeology Institute at the University of Warsaw.

ARCHIVING. The technology used in the system ScanBright archeo allows simultaneous and precise measurement of the shape and colour of the object. Additionally, the 3D scanner can be integrated with a shadeless lighting system that enables a realistic replication of the object's colour. The result of the 3D scanning is a colour cloud of points that fully reproduces the surface characteristics of the scanned object with the highest resolution on the market. The data is saved in universal formats allowing for it to be imported to all professional programs dedicated to measurement data edition, such as: Geomagic, ZBrush, Sketchfab.

VIRTUAL EXAMINATION. The cloud of points can be automatically converted to a triangle mesh by using the software for operating the 3D scanner – SMARTTECH3Dmeasure, creating a continuous surface. The results can be freely analysed, including the creation of all kinds of cross-sections, dimensioning, calculating the surface and volume, comparing the surfaces to each other.

VISUALISATION. Generating a triangle mesh with information about the real texture colour, which is saved in each individual point, allows the creation of a realistic 3D models. They can serve as data for archiving as well as for the object visualization in virtual museums or portals.



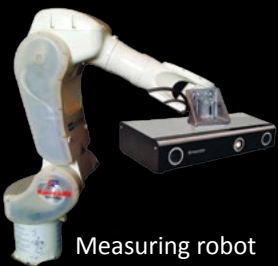
3D scanning process

3D scanning result
Point cloud (X,Y,Z – RGB)

Virtual object analysis

Virtual museum
The publication of objects on the Internet

Additional accessories:



Measuring robot



Automatic rotary stage

Technical details	10MPix	5MPix
Technology	Structured white LED light	
Accuracy [μm]	10 - 350	
Scanning field [mm^2]	from 150x200 to 1200x1600	
Distance between points [mm]	0,05 - 0,4	0,08 - 0,6
Sampling rate [points/ mm^2]	6 - 400	3 - 156
No. of points from single scan [points]	10 000 000	5 000 000
Tripod	+	+
Texture measure	+	+
Mobile work station	+	+

