

faceSCAN 3D-CAL

3D DIGITISATION OF THE HUMAN FACE



APPLICATION AREAS

- Medical science & technology
- Cosmetic treatment
- Face recognition
- Aesthetic surgery
- Anatomy & anthropology
- Animation & motion visualisation
- Further task specific applications



Mission and Application

For many years, Breuckmann **faceSCAN** systems are among first choice for the exact, authentic and fast 3-dimensional acquisition of the human face. Application areas are particularly found in scientific, medical and cosmetic areas.

The **faceSCAN** 3D-CAL system represents the 3rd generation of our successful **faceSCAN** series. Specifically developed for the generation of high resolution 3D data, the **faceSCAN** 3D-CAL system offers an optimal solution with regard to price and efficiency. Equipped with a high resolution **1.4 MPix** camera, par-

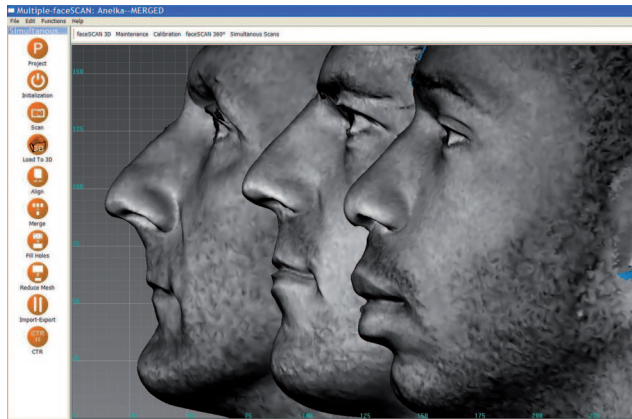
ticularly the quality of the 3D texture has been further increased significantly.

All sensors of the **faceSCAN** 3D-CAL system use our proven miniaturized projection technique, allowing a very rapid data acquisition time in only 0.8 seconds per sensor.

Our **faceSCAN** 3D-CAL systems are therefore very insusceptible to movements of the person to be measured, delivering 3D representations of facial expressions at remarkably authentic and natural looking results.

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PERFORMANCE FEATURES

- ▶ Robust and stable system construction with protected lenses
- ▶ Convenient combination of 2 or 4 sensors for extended measuring area of 180° or 360°.
- ▶ High resolution data acquisition within a few seconds even using a combination of 2 or 4 sensors
- ▶ Convenient adjustment to persons of different heights by tilting the scanning unit or by using the system's optional motorised lifting stand
- ▶ Intuitive and user friendly user interface for the system's acquisition and evaluation software
- ▶ Low-maintenance and economical through sturdy construction and use of durable halogen lamps

TECHNICAL SPECIFICATIONS

Sensor	
Projection Technology	Miniature Projection Technique
Light source	100 W halogen
Data acquisition	High resolution digital colour CCD camera
Image data interface	IEEE 1394 (FireWire®)
Digitising	1384 x 1036 Pixel
Operating distance	ca. 1 m
Acquisition time	0.8 s / sensor (1.6 s for 180° / 3.2 s for 360° / 1.6 s for 360° in fast mode)
Field of View	600 x 460 mm, 160° (180° with 2 sensors, 360° with 4 sensors)
Measuring depth	400 mm
Point spacing	0,43 mm
Feature accuracy	+/- 200 µm

Image Processing

Host PC	Dell Workstation (system configuration on request)
Operating system	Microsoft Windows XP Professional (optional x64 Bit Edition)
Measuring software	OPTOCAT for Windows, module faceSCAN 3D-CAL
Data interface	Various formats for point clouds and triangular meshes (STL, PLY, VRML)
No. of scan points	up to 1.4 Mio. / sensor

Optional Accessories

Motorised stand	motorised stand for height adjustment
Flight case	custom made, robust transport and storage box for scanner and accessories
Flash set	Professional photographic flash equipment
Laptop	Optional for single or double (=180°) systems
visioFACE	Repositioning unit for the conduction of long term studies

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