

Glasses-Free 3D Technology

Display, Camera, and System Solutions
for the Medical Sector



True 3D with the Naked Eye

High-end 3D technology – made in Germany

Our mission is to launch a new era of autostereoscopic 3D experiences on a global level. At 3D Global, we focus on innovative products that revolutionize the way people see the world. Our cutting-edge glasses-free 3D screens and system solutions are based on our patented 3D filter technology. Experience breathtaking true 3D with the naked eye.

What sets us apart is that we are not a supplier, but an expert partner for integrating 3D technology into your product. 3D Global is at your side throughout, from the initial idea through to series production and certification. And from development to production of our 3D screens, every link in the value chain is located in Germany for thorough monitoring.

When it comes to integrating our 3D technology, our experts work closely with you to ensure optimum integration of camera systems and image processing technologies into your products. So you can enjoy the best possible live images, brought to life on world-first 3D screens.



Three-dimensional
Spatial vision with
breathtaking depth



No 3D glasses
Patented filter technology
means no more glasses



Technology partner
More than a supplier,
your dedicated 3D expert



Customized
3D technology can be
adapted to your application



Patented
50+ patents, trademarks,
and brands



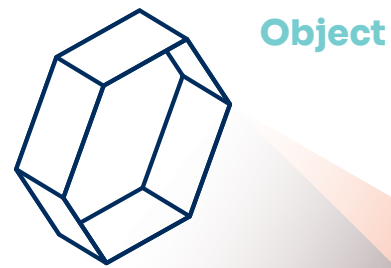
Certified
We are certified according
to ISO 9001

Welcome to 3D Global – shaping the future of vision!

Join 3D Global as we explore a new dimension of vision. Experience the future of 3D technology and discover how our solutions change the way you see the world.



High-Tech 3D Components



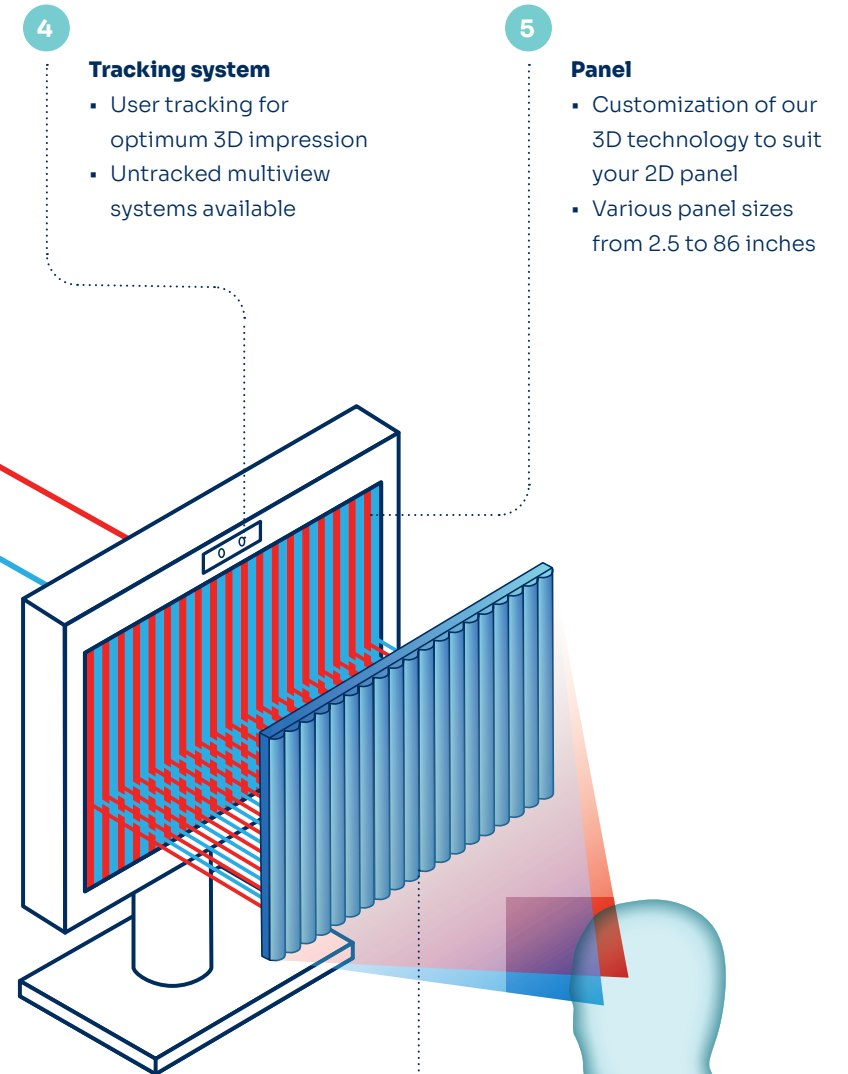
- 1 **Option 1: 3D camera**
Customized camera development for your application
 - Stereo cameras
 - Zoom lens
 - Autofocus
 - Fixed focus
- 2 **Processing unit**
 - FPGA platform for highest performance
 - Short latency time
 - Entire signal chain coordinated
 - Optimum system integration in monitor housing
- 3 **Option 2: 3D signal input**
 - HDMI side by side
 - Customized interface

We provide individual components or complete systems along the entire signal chain of a 3D visualization system.

In a glasses-free 3D system, there must be precise coordination between the capture of 3D images via stereo cameras and the reproduction of 3D images via a glasses-free 3D monitor. Optimum coordination of the lens, software, and electronics is essential for generating a realistic impression of 3D with a short delay time. Our biggest strength in this regard is the combination of camera and monitor to ensure the best possible performance within your overall system.

We perform custom adjustments to guarantee optimum system integration in your products, with support being provided by our experienced engineers.

The SCALEREO 3D digital microscope developed in-house at 3D Global serves as proof of concept for the entire system chain comprising the 3D camera, processing unit, and 3D monitor:



- 4 **Tracking system**
 - User tracking for optimum 3D impression
 - Untracked multiview systems available
- 5 **Panel**
 - Customization of our 3D technology to suit your 2D panel
 - Various panel sizes from 2.5 to 86 inches
- 6 **3D filter / lenticular**

Our core business is the development and manufacture of optical filter elements for use in 3D displays. The filters themselves consist of a thin carrier material (0.1 mm film or 0.1 – 3 mm glass) to which one or more optically active layers are applied. The parameters of the layer(s) and the layer structure depend on various aspects such as the base LCD panel and the desired properties of the 3D display (number of views, viewing distance, degree of image separation, etc.).

Viewer

Ergonomic 3D Digital Microscope

Example application: assembly and inspection of medical components



SCALEREO
MORE PRECISION AT WORK

Experience three-dimensional depth without limits

SCALEREO is an ocular-free digital 3D industrial microscope that provides a natural view and displays objects with exceptional clarity. This glasses-free 3D experience offers major benefits, optimally enabling users to see and "feel" the depth of the object on the 3D screen.

EXAMPLE APPLICATIONS:

- + Assembly and inspection of medical components
- + Inspection and quality assurance in cutting and 3D printing
- + Equipping of circuit boards, solder joint monitoring, and reworking

SCALEREO Desk



This innovative standalone digital microscope delivers excellent depth of focus and spatial 3D. Instead of constantly leaning forward to look through an ocular, you can now enjoy the comfort of sitting up straight to view stunning 3D depictions on the 3D monitor. SCALEREO Desk also features autofocus, flexible ring lighting, and a stepless zoom system.

SCALEREO AddOn



The SCALEREO AddOn makes it simple to take existing optical microscopes and convert them to digital 3D microscopes without an ocular. Not only can this 3D upgrade easily be applied to all conventional microscopes with a parallel beam path, it can be adapted for ZEISS, Leica, Olympus, Askania, Nikon, and more.

Product highlights



Real-time stereo camera

Perform your precision mechanical tasks with even greater care thanks to easy hand-eye coordination. Images are displayed in real time with minimal delay.



A truly practical solution

From training to in-depth discussion, this microscope helps you share your knowledge and experience. You and your colleagues can view key details simultaneously and explain what is displayed on the monitor.



Ergonomic work

More comfort for better health in the workplace. Our 3D microscopes enable an ergonomic sitting position, more comfort, and less tiring work, especially during time-consuming projects.

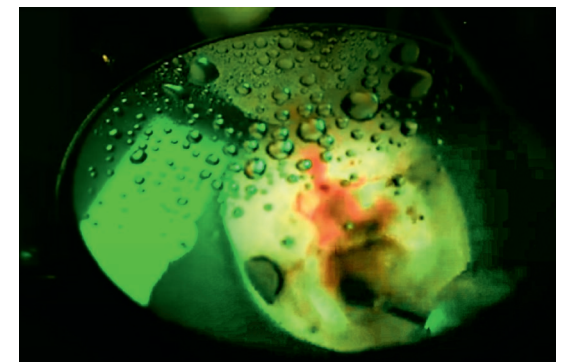
Treatments with 3D Microscopes

Example application: digital 3D dental microscope



CJ-Optik: a leading manufacturer in the field of dental microscopy

Our close cooperation has established a next-generation digital 3D treatment system for dentists, featuring integrated detection of tooth decay, tartar, and artificial dental material.



Detection of tooth decay in fluorescent mode

FURTHER APPLICATION



Hair transplant



Ophthalmology



Ear, nose, and
throat care



Hand, plastic, and
cosmetic surgery



3D Global was responsible for the development of the stereo cameras and the 3D monitor. It also provided support during system integration into the electronics.

Real-Time 3D Visualization

Example application: depiction of MRI/CT data



Enhanced diagnostics via 3D display

Medical technology has made enormous progress in recent years, with versatile 3D innovations transforming the medical landscape. The glasses-free 3D monitors from 3D Global represent a milestone in the fields of medical imaging, diagnostics, and radiology. They deliver a whole host of benefits for doctors, patients, and the entire healthcare sector.

In the case of doctors, 3D technology enables precision viewing and assessment of detailed 3D images of anatomical structures and tissue via MRI and CT – without any need for auxiliary equipment such as special glasses. This ensures more accurate diagnoses and improved identification of illnesses, treatments, and

surgical procedures. Enhanced spatial representation and depth perception enable doctors to better determine the size and location of tumors and potential metastases or assess tissue structures.

PRODUCT HIGHLIGHTS:

- + Plug and play: preconfigured system with drivers for your application
- + Supports MRI and CT models: no need to prepare data sources or image signals
- + 3D visualization in real time without 3D

From the 2D MRI depiction ...



... to 3D depiction in real time:



OEM Component Integration

Example application: SIMtoCARE dental simulator



OEM integration in dental simulator

SIMtoCARE devices make it possible to simulate a wide variety of treatments, such as drilling teeth or injecting with needles. The use of our 3D panel technology, combined with haptic feedback during the simulation, has succeeded in generating a breathtakingly realistic treatment setting.

“ We use 3D Global’s autostereo screens for our applications in dental and medical simulations. We value this productive partnership and have been impressed by the 3D Global team, its high-tech production facilities, and the quality with which the 3D view is optimized for this purpose.”

Karel van Gelder
CEO and Co-Founder of SIMtoCARE



Product highlights



Improving the efficiency and quality of education, training, and care



Realistic and practical training experience



Realistic 3D models for learning purposes



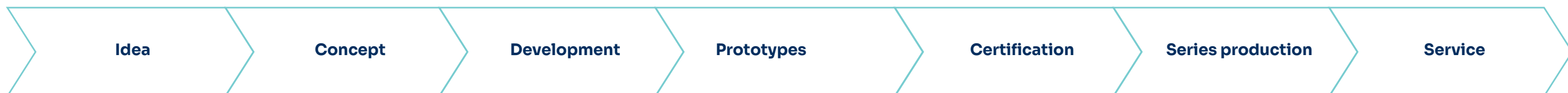
3D Global provided support during the development of the 3D technology and its integration into the simulator. An FPGA board was deployed for control purposes alongside a customized 3D panel.

Your 3D Partner

Creating unique viewing experiences together



The complete process – from a single source.



Our goal is to provide our customers with the best possible support when integrating our 3D technology into their products.

We help with every stage of the process, from the product idea through to service for serial products.

Our engineers assist the implementation of hardware and software, working closely with the development departments of our customers. As the entire process is realized on-site at 3D Global, this enables fast development and production times.

Experience 3D live at our Aalen demo center

3D Global invites you and your team to visit the 3D demo center at our site in Aalen, Germany.

With support from our engineers, we will show you the many potential applications of our 3D technology and discuss how it could be integrated into your products.

We look forward to welcoming you!

Book an appointment today:

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