



Press release

CES 2022: OQmented Presents New MEMS-based 3D Depth Camera Technology

OQmented, the German deep tech company for MEMS-based AR/VR display and 3D sensing solutions, unveils its mobile 3D LiDAR camera technology for the first time at CES 2022 in Las Vegas, NV (Jan 5-8, 2022).

Itzehoe, Germany, January 5, 2022 – OQmented’s ultra-compact 3D depth sensing camera provides a cost-effective solution for upgrading mobile or stationary cameras with complimentary RGB-D technology. Applying a biaxial MEMS laser scanner, it is designed around a patented structured light projector and delivers accurate high-resolution scans across an adjustable large field of view. Unlike conventional low-resolution infrared dot projectors, OQmented’s LiDAR camera projects dynamically changing infrared patterns by applying the patented Lissajous laser scanning technology which is key to frame rates in the kilohertz range. Concentrating all laser energy of an eye-safe IR laser in a single spot that is dynamically scanned by the biaxial MEMS mirror is crucial for overcoming the typical depth range and resolution limitations of standard 3D LiDAR cameras with stationary IR dot projectors.

The unique dynamic infrared pattern projector in OQmented’s 3D depth camera technology can convert smartphones with regular RGB cameras into smartphones with 3D LiDAR cameras. Minimized hardware and Artificial Intelligence algorithms for depth reconstruction enable maximum cost efficiency and compactness of the device. In addition to 3D depth camera applications for smartphones, OQmented’s LiDAR cameras can be specifically trained and adapted for other use cases, such as gesture recognition, AR/MR/VR context or people counting.

The applications for 3D camera technology are manifold, both for consumer and commercial fields. Global Industry Analysts forecast the 3D camera market to reach a global market size of \$13.4 billion by 2026¹. OQmented’s technology addresses the challenge of achieving high resolution images with just a few components, a small form factor, cost-efficiency and very low power consumption.

¹ [Global 3D Camera Market to Reach \\$13.4 Billion by 2026 \(prnewswire.com\)](https://www.prnewswire.com/news-releases/global-3d-camera-market-to-reach-134-billion-by-2026-1088888888.html)



“Achieving the minimum device size but also the necessary high performance is a challenge for which we have developed a very cost-effective solution,” said Ulrich Hofmann, CEO/CTO and co-founder of OQmented. Thomas von Wantoch, CEO/CFO and co-founder of OQmented, adds: “Fast, compact and accurate 3D scanning systems will play an important role for all AR/MR/VR applications, therefore, we are thrilled to present our solution at CES 2022.”

OQmented also shows an innovative AR smart glasses technology demonstration that incorporates and applies OQmented’s Bubble MEMS® technology. Bringing together OQmented’s one-chip MEMS projection solution and the diffractive waveguide display of their partner Dispelix, the smart glasses demo leverages laser beam scanning technology to enable stylish and lightweight Augmented Reality glasses. The demonstration features a revised hardware platform, improving the stability of the projection.

OQmented is demonstrating at booth 15972, Tech East, Las Vegas Convention and World Trade Center (LVCC), Central Hall.

About OQmented

OQmented is a deep tech company developing and selling ultra-compact LBS projectors for Augmented Reality devices and best in class 3D sensing solutions for mobile and stationary applications. The unique Lissajous scan pattern in combination with the patented vacuum packaging Bubble MEMS® technology and proprietary electronics and software enable new product categories in consumer and various other industries. Further information can be found at www.oqmented.com

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