

Volumetric Display Market Forecast 2022-2031: Innovations Driving Future of 3D Imaging

Volumetric Display Market Expected to Reach \$14.8 Billion by 2031—Allied Market Research

WILMINGTON, DE, UNITED STATES, October 9, 2024 /EINPresswire.com/ -- Medical imaging procedures such as CT scans, MRIs, and ultrasounds benefit greatly from volumetric displays. Medical practitioners can better plan and perform surgeries and diagnose patients as they can see intricate anatomical features in three

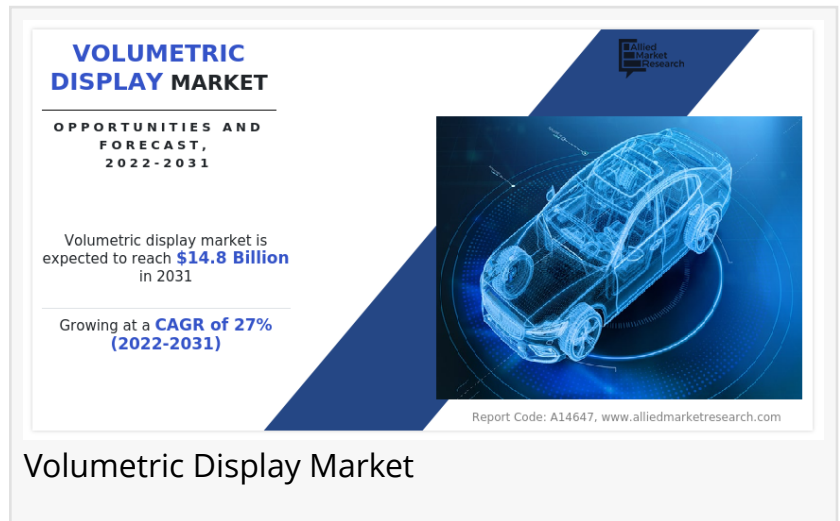
dimensions. Volumetric displays are becoming more widely used in the healthcare sector owing to the rising demand for sophisticated medical imaging techniques, which is further expected to contribute to the [volumetric display market](#) growth in the upcoming years. Allied Market Research, titled, "Volumetric Display Market," The volumetric display market size was valued at

\$1.4 billion in 2021, and is estimated to reach \$14.8 billion by 2031, growing at a CAGR of 27% from 2022 to 2031.



Rising demand for visualization technologies drives the volumetric display market. Surround displays offer immersive 3D visuals without glasses, creating opportunities across entertainment industry."

Allied Market Research



Volumetric Display Market

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A volumetric display refers to a type of three-dimensional display technology that creates visual content in a volume of space rather than on a flat surface. It enables viewers to observe three-dimensional objects or images from various angles without the need for special glasses or goggles.

Unlike traditional two-dimensional displays, such as computer screens or television monitors, which present images on a flat surface, volumetric displays aim to recreate the perception of depth and dimensionality by projecting light or other forms of energy into a defined space.

Volumetric displays are increasingly in demand because of their unique ability to provide an immersive 3D viewing experience. Rising demand for cutting-edge 3D visualization solutions across several sectors is driving this demand. Volumetric displays, for instance, are utilized in the entertainment sector to produce fascinating visual effects in motion pictures, television shows, and video games. The adoption of volumetric displays in the medical field is still in its early stages. However, there are promising developments and increasing interest in leveraging this technology for medical applications. Volumetric displays offer several advantages over traditional two-dimensional displays, such as providing a more immersive and intuitive visualization experience for medical professionals. Medical imaging is one of the primary areas where volumetric displays can have a significant impact. By generating true 3D images, volumetric displays can enhance the interpretation of medical scans, such as CT scans, MRI, and ultrasound, by allowing physicians to view and interact with the data more realistically and comprehensively. This can aid in diagnosis, treatment planning, and surgical procedures.

However, volumetric display technology is still evolving and there is a lack of standardized manufacturing process. This lack of standardization can lead to higher costs due to customization and the need for specialized components. To achieve optimal performance and visual quality, volumetric displays require high-quality components, such as advanced projectors, mirrors, and optical elements. These components may be costly, further contributing to the overall price. Furthermore, volumetric displays are not yet produced on a large scale, and mass production would typically help reduce costs. Limited demand and market size for volumetric displays can make it challenging for manufacturers to achieve cost efficiency.

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Volumetric displays can provide a more immersive and compelling visual experience than conventional 2D displays. Therefore, they prove to be a desirable option for a variety of applications. The creation of new materials is one of the major areas of technological progress that might help the market for volumetric displays. The usage of nanomaterials, for instance, may result in displays that are more effective, brighter, and offer a larger color range. High-quality volumetric displays might also be produced more easily and affordably due to new manufacturing techniques like 3D printing. The development of the volumetric display industry may also be significantly influenced by improvements in computer graphics and processing speed. More realistic and detailed 3D volumetric displays that can be shown on volumetric screens could be conceivable as computer graphics technology advances. In industries like health, engineering, and architecture where 3D visualization is crucial, may lead to new applications. Volumetric LED displays may potentially benefit from the rising popularity of virtual and augmented reality experiences. Volumetric displays may be used in combination with other immersive technologies, such as head-mounted displays, to make virtual worlds even more authentic and interesting. These factors are anticipated to [volumetric display market growth](#) in the upcoming years.

The volumetric display market share is segmented based on type, technology, application, and region. By type, it is classified into swept volumetric displays, holographic displays, and static volumetric displays. By technology, it is classified into digital light processing (DLP) and liquid crystal on silicon (LCOS). By application, it is classified into aerospace & defense, medical, automotive, communication & entertainment, and others. By region, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

The report offers a comprehensive analysis of the global [volumetric display market trends](#) by thoroughly studying different aspects of the market including major segments, market statistics, market dynamics, regional market outlook, investment opportunities, and top players working towards the growth of the market. The report also highlights the present scenario and upcoming trends & developments that are contributing toward the growth of the market. Moreover, restraints and challenges that hold power to obstruct the market growth are also profiled in the report along with Porter's five forces analysis of the market to elucidate factors such as competitive landscape, bargaining power of buyers and suppliers, threats of new players, and emergence of substitutes in the market.

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- COVID-19 caused disruptions in global supply chains due to lockdown measures, travel restrictions, and factory closures. This potentially impacted the production and availability of components required for volumetric display technologies. Manufacturers heavily reliant on international supply chains faced challenges in sourcing necessary parts, leading to delays or increased costs.
- The pandemic resulted in economic uncertainties and reduced business activities across many industries. This had a direct impact on the demand for volumetric display technologies. Companies had to cut back on non-essential investments, including the adoption of emerging display technologies, due to financial constraints and shifting priorities.
- Volumetric displays are often utilized for presentations, product launches, trade shows, and exhibitions. The event and exhibition industry has been significantly affected by the pandemic, with cancellations, postponements, and a shift toward virtual events. The reduced demand for physical events has likely impacted the adoption and deployment of volumetric displays in such settings.

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- Based on type, the holographic displays sub-segment emerged as the global leader in 2021 and is anticipated to be the fastest growing during the forecast period.
- Based on technology, the digital light processing (DLP) sub-segment emerged as the global leader in 2021 and the liquid crystal on silicon (LCOS) sub-segment is predicted to show the

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