

# **3D Display Market Assessment, By Display Type [Head Mounted Display, Stereoscopic Display, Volumetric Display], By Technology [Plasma Display Panel, Light Emitting Diode, Digital Light Processing, Organic LED, Others], By Application [Smartphone, Virtual Reality Headset, Mobile Computing Device, Television, Monitor, Projector, Others], By End-user [Aerospace & Defense, Automotive, Education, Healthcare, Gaming, Advertising & Marketing, Retail, Others], By Region, Opportunities and Forecast, 2016-2030F**

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## **Abstracts**

Global 3D display market size was valued at USD 80.26 billion in 2022, expected to reach USD 252.43 billion in 2030, with a CAGR of 15.4% for the forecasted period between 2023 and 2030.

There are several benefits of 3D Display in various industries like entertainment, medical imaging, and gaming, improving user experiences and aiding in tasks like medical diagnosis and architectural visualization. Factors driving market growth include technological advancements, rising demand for augmented and virtual reality applications, increased adoption in automotive and healthcare sectors, and the expanding use of 3D displays in education and simulations. Additionally, the appeal of 3D content and the desire for more immersive experiences continue to fuel the growth of the 3D display market.

The entertainment industry is a significant driver of the 3D display market growth by adopting 3D displays for immersive experiences in movies, gaming, and virtual reality. Demand for enhanced visual engagement in entertainment content fuels the development of advanced 3D display technologies.

For example, in January 2023, Shenzhen-based company New Vision Display (NVD) unveiled its 3D Gesture Touch sensor feature, utilizing Microchip's patented GestIC technology. The innovation enables users to engage with a device through uncomplicated hand gestures, eliminating the need for physical contact and functioning at a short distance from the screen.

#### Rise in Usage of Smartphones, a Prominent Driver

The continuous increase in the usage of smartphones is propelling the growth of the 3D Display Market. This surge in usage has led to advancements in mobile 3D display technology, with manufacturers constantly striving to enhance user experiences by delivering more realistic and engaging visuals on handheld devices. As smartphones evolve and cater to consumer demands for immersive content, the 3D display market experiences sustained growth.

For example, as per bankmycell.com, as of 2023, the global count of smartphone users stands at 6.92 billion, which is approximately 85.82% of the world's population. When both smartphones and featured phones are considered, the collective number of individuals equipped with these mobiles reaches 7.33 billion, covering roughly 90.90% of the world's population.

#### Rising Demand for Digital Photo Frames Fosters Market Growth

The rising demand for digital photo frames is a major factor fueling the growth of the 3D display market. Digital picture frames with 3D display technology provide a more immersive and appealing method to display images and memories. Customers are enticed by the improved viewing experience and the potential to bring their photographs to life in three dimensions. Hence, the rise in consumer interest in digital picture frames with 3D displays drives market expansion, with the leading manufacturers creating novel and competitively priced solutions to meet this demand.

For example, The Looking Glass Portrait is currently the only commercially accessible display that can present 3D contents for both static and interactive scenarios without requiring eye tracking or glasses.

## The Gaming Industry is Expected to Witness Substantial Opportunities for Future Market Growth

The gaming industry is poised for significant growth in the 3D display market due to its potential for immersive and visually engaging gameplay experiences. As technology advances, gamers increasingly seek realistic and three-dimensional visuals, fostering demand for 3D displays. Innovations in gaming consoles, virtual reality, and augmented reality drive the trend, offering substantial opportunities for 3D display adoption and expansion in the gaming sector.

For example, in October 2022, Acer India introduced the 'Predator Helios 300 SpatialLabs Edition,' a gaming laptop designed to provide stereoscopic 3D gaming experiences. Stereoscopic video games employ various stereo display methods to create a sense of depth for players. The laptop is equipped with 12th Gen Intel Core i9 processors and NVIDIA GeForce RTX 3080 laptop GPUs, enhancing its gaming performance in 3D display.

## The Asia-Pacific Led the 3D Display Market in All Aspects

Asia-Pacific has emerged as a leader in the growth of the 3D display market due to several factors. It has a strong manufacturing base, particularly in countries like South Korea, Japan, and China, which has allowed for the cost-effective production of 3D display components. Additionally, increasing consumer demand for innovative entertainment experiences, coupled with government support and R&D investments, has fostered an environment favorable to 3D display market growth in the region.

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## Government Initiatives

Government initiatives are essential for fostering growth in the 3D display market. They can provide funding, promote R&D, and establish industry standards. Additionally, regulations and incentives can support the adoption of 3D display technology in critical sectors like healthcare and education. Moreover, government support can stimulate

innovation, ensure market stability, and help address potential challenges, driving the overall advancement and competitiveness of the 3D display industry.

For example, in March 2023, MDPI highlighted the Korean government's initiative, 'Near-Eye Holographic 3D Display and Advanced Amplitude-Modulating Encoding Scheme for Extended Reality,' gaining significant prominence in the country. The initiative represents a substantial effort by the government to boost market growth. Electronic holographic displays are key component of the initiative and possess the capability to recreate object light's optical wavefront, delivering exceptionally lifelike three-dimensional (3D) visuals, setting them apart from traditional stereoscopic displays.

### Impact of COVID-19

The COVID-19 pandemic had a significant impact on the 3D Display Market. Before the pandemic, the 3D display market exhibited steady growth, driven by entertainment, gaming, and medical imaging applications. However, the outbreak brought supply chain disruptions and manufacturing slowdowns, hampered component production, and hit sectors like cinema due to social distancing measures. On the other side, it sparked a surge in demand for 3D displays for personal use, driven by the rise in home entertainment, remote work, and telemedicine.

In the post-COVID landscape, as economies reopen and seek immersive experiences, the 3D display market is gaining traction. Renewed interest in 3D technologies is emerging, particularly in gaming, augmented reality, and virtual reality applications, while healthcare investments continue to drive the market. Moreover, innovations like glasses-free 3Ds are gaining traction, and the market is adapting to the evolving consumer landscape, focusing on accessible and versatile 3D solutions.

### Key Players Landscape and Outlook

The 3D display market is advancing rapidly as major companies boost their investments in cutting-edge technologies such as Light Emitting Diode (LED) and Organic LED (OLED). Additionally, these companies are allocating substantial resources to improve their presence and earnings in the smartphone sector. Furthermore, they actively engage in collaborations, acquisitions, and partnerships, transforming the industry's structure and accelerating overall market growth.

In September 2023, Sony introduced a new product in India known as the 'Spatial Reality Display .' This monitor enables users to experience 3D content without the need

for special glasses or virtual reality headsets. With a 27-inch size and 4K resolution, it boasts 10-bit processing, full Adobe RGB color gamut support, and a super-resolution engine capable of enhancing 2K content to 4K quality.

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