Extended Reality Display - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Extended Reality Display Market size is estimated at USD 1.93 billion in 2024, and is expected to reach USD 12.79 billion by 2029, growing at a CAGR of 46.06% during the forecast period (2024-2029).

The onset of the pandemic has triggered the development of extended reality technologies in retail, education, and healthcare. However, the use of XR Technologies has always been dominant in the gaming and entertainment industry despite the impact of COVID-19 that accelerated the adoption of XR technologies in other end-user industries. Thus, driving the growth for displays in the extended reality market.

Key Highlights
-The market numbers stated in the study indicate the value of displays sold by the vendors across applications such as gaming, entertainment, retail, healthcare, education, military and defense, automotive and manufacturing, and others. The displays used in the market are designed as either direct view panels or microdisplay panels. The AR display panels are designed as see-through and allow users to view the digital data while fully being aware of the physical world around them.
-The COVID-19 pandemic resulted in an upsurge in adopting XR technologies that drive the demand for displays studied in the market. For example, beauty retailers such as Sephora and Ulta have to forbid customers from physically testing the beauty products on their skin. Beauty retailers are instead turning to AR to help consumers digitally test products to assist in buying decisions.
-Therefore, the use of immersive technology in end-user settings is expected to increase further over the coming years due to the short-term growth in demand augmented by the effects of the pandemic.
-Moreover, Mixed reality adoption is gaining momentum in various sectors where information availability at the eyesight becomes an added advantage and gives an edge. Microsoft is increasingly focusing on innovating its offering to expand its application field.

For instance, in March 2021, Microsoft won a contract from the US Army to produce headsets based on the HoloLens 2 worth USD 21.9 billion. Such developments are further expected to impact the adoption of the technology and drive the need for XR displays studied in the market.
-One of the most difficult challenges faced by the XR technology pertains to educating the wider audience - the broader market. The current applications (for smartphones, tablets, and wearables) are limited to a single user alone. For XR to be more accessible, developing multi-user, uniform, and streamlined experiences is a must. In the current market scenario, the availability of such products is limited, thus acting as a significant challenge to the market's growth.
-In the coming years, real-time rendering and interactive AI, the increasing popularity of immersive experiences, and the proliferation of 5G are expected to transform the theatrical experience and boost the growth of the XR display market. For instance, if the end-to-end latency (delay between the user's head movement and the change of the display in a VR headset) is very high, users can experience motion sickness. To avoid it, VR systems need less than 20ms latency, which a 5G can deliver. Thus, 5G is expected to support the demand for the XR market.

Extended Reality Display Market Trends

Rising Adoption of AR and VR Applications Across Multiple End-User Industries

- The rapid adoption of AR and VR is transforming the gaming industry, significantly creating more opportunities for the XR display market. Companies are making rapid developments in their products to gain maximum market traction. For instance, the Oculus Quest VR headset improvised its VR system by adding a hand tracking feature, which may enable VR users to use their fingers to manipulate the VR worlds.
- Gesture-based computing is now becoming a part of gaming, TVs, devices, kiosks, medical, 3D sculpting, engineering, medical professionals, designers, advertisers, and even people with physical disabilities. Gesture-based gaming has moved beyond traditional gaming consoles and is witnessing increasing adoption in educational games for children. For instance, Magic Touch Math is the first game that focuses on learning mathematics using custom gesture drawings. Thus, gesture-based recognition can also be used in applications apart from traditional gaming applications.
- In September 2021, Audi announced the virtual reality entertainment holoride on the road. This makes travel to virtual worlds from within an Audi possible. The startup holoride is working to make car rise a multi-modal experience. This new technology will merge VR content with driving movements in real-time to enable back seat passengers in Audi to dive into games, movies, and presentations and experience virtual content by adapting to the driving movements of the car in real-time using VR glasses.
- Further, in September 2021, the University of East London (UEL) announced the launch of an EON-XR Center in partnership with EON Reality. The EON-XR Center in the United Kingdom lets students and lecturers access AR and VR-based training through various devices, including smartphones, websites, and VR headsets.Thus, driving the growth and demand for the market studied. Thus, such developments are expected to further drive the demand for the XR displays studied in the market.

North America is Expected to Hold Significant Share

- The North American region is expected to hold a significant market share as the United States Government is finding both direct and indirect ways to use extended reality technology to facilitate innovation and promote prosperity.
- For instance, the Foreign Service Institute at the State Department has introduced VR as an experiential learning tool in specific training. Several AR and VR training programs have been implemented in the region to develop local workforces and manage wastewater.
- The region is dominating the market due to factors such as high technology exposure. Besides, the easy availability of resources

has created a robust demand for extended reality devices. Several regional companies are deploying innovative displays into their AR/VR wearables.
- Many large American technology giants, from Apple to Google, are significantly investing in building VR and AR equipment. As the display forms a critical element in such devices, such investments will aid the market's growth.
- For instance, in June 2022, Facebook's parent company Meta unveiled four virtual reality (VR) prototype displays for research purposes as the company seeks to achieve the full potential of metaverse technology. The models are expected to deliver visual experiences that closely resemble reality and solve problems such as poor resolution, distorted views, and eye fatigue while making headsets lighter.
- The region is also home to many major players, such as eMagin Corporation, a major manufacturer of high-resolution OLED microdisplays for AR/VR and other near-eye imaging products. The company hosted an exhibit of its current product line, including its dPd Direct Patterning OLED Microdisplay Technology, at Display Week 2022, one of the industry's largest conferences devoted to the display market, in San Jose, California, in May 2022.

Extended Reality Display Industry Overview

The Extended Reality Display Market primarily comprises multiple domestic and international players. The competitive rivalry is expected to be high and remain the same during the forecast period among the players. Significant players in the market include Sony Corporation, Samsung Electronics Co., Ltd., Kopin Corporation, Japan Display, Inc., etc. Technological advancements in the market are also bringing considerable competitive advantage to the companies, and the market is also witnessing multiple partnerships.

- June 2022 - Kopin was awarded a contract to develop a new in-vehicle display imaging system for a US prime defense contractor. The new system would integrate Kopin's high-brightness, high-resolution, low-power ferroelectric liquid crystal on silicon (FLCOS) microdisplay and custom optic into a heavily ruggedized custom housing to enable operational use in extremely harsh environments.
- June 2022 - LG Display is planning the groundwork to potentially supply Apple with displays for its second-generation mixed reality (MR) device. LG will order deposition equipment from Sunic System, allowing the company to produce micro OLED panels.
- May 2022 - Samsung Electronics launched Micro LED technology at Integrated Systems Europe (ISE) with three new models of its state-of-the-art display technology, The Wall. The next-generation technology of The Wall would deliver benefits for transforming any business and unlocking new opportunities.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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