

Near-Eye Display Market Segmentation: By Device Type (AR Devices, VR Devices, Others [EVF and MR Devices]), By Components (Image Generators, Optical Combiners, Imaging Optics), By Technology (TFT LCD, AMOLED, LCoS, OLEDOS, MicroLED, DLP, Laser Beam Scanning), By Vertical (Consumer, Automotive, Aerospace & Defense, Medical, Others [Education and Construction]), And Region – Global Analysis of Market Size, Share & Trends For 2019–2021 And Forecasts To 2031

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Abstracts

[170 + Pages Research Report] Near-Eye Display Market to surpass USD 13 billion by 2031 from USD 1.4 billion in 2021 at a CAGR of 25.2% in the coming years, i.e., 2021-2031.

Product Overview

NEDs, also known as head mounted displays (HMDs) or wearable displays, project a virtual image into one or both eyes' field of view. To the naked eye, the virtual image appears to be considerably larger than the comparatively small display panel and optics employed to make it. Near-eye displays are the headphones of the display industry, allowing users to create compact, portable, and personal viewing experiences. Near-eye displays provide several advantages over standard displays, including their small size, portability, light weight, low power consumption, and ability to be see-through.

Market Highlights

Global Near-Eye Display Market is expected to project a notable CAGR of 25.2% in 2031.

Global Near-Eye Display Market to surpass USD 13 billion by 2031 from USD 1.4 billion in 2021 at a CAGR of 25.2% in the coming years, i.e., 2021-2031. Factors driving the growth of the near-eye display market include the increased use of OLEDoS micro displays in novel applications such as projection, imaging, smart glasses, and the rapid acceptance of AR devices in many verticals.

Global Near-Eye Display Market: Segments

VR segment is expected to lead with the highest CAGR during the forecast period 2021-31

By Device Type, the global Near-Eye Display Market is divided into AR Devices, VR Devices, Others (EVF and MR Devices). In past years, VR devices dominated the near-eye display industry. Near-eye display-based HMDs power these gadgets, which deliver a totally digital experience that simulates a three-dimensional environment in the real world. Near-eye displays are widely used in VR systems since they are inexpensive and can be mass-produced by Asian manufacturers. By allowing users to immerse themselves in a highly realistic environment, virtual reality gadgets have transformed consumer applications.

TFT LCD segment is expected to progress with the highest CAGR during 2021-31

On the basis of technology, the global Near-Eye Display Market is fragmented into TFT LCD, AMOLED, LCoS, OLEDoS, MicroLED, DLP, and Laser Beam Scanning. The market for near-eye displays was dominated by TFT LCD technology. This technology allows for lightweight, small displays with great resolution and low power consumption. These displays can also be mass-produced and widely used in virtual reality systems. These reasons are propelling the market for TFT LCD near-eye displays forward.

Market Dynamics

Drivers

Significant growth in the use of OLEDoS micro displays

The rise of the metaverse, the spike in the use of OLEDoS tiny screens, and the expanding use of AR and VR devices all contribute to the market's promising growth potential. The advent of the Metaverse, as well as increased investments and innovations from technology heavyweights, will play a crucial role in moving the near-

eye display market forward in the near future. Due to enhanced qualities such as greater contrast, faster response time, lower weight, more compact size, negligible image blurring, and a wider operational temperature range than LCDs, OLEDoS micro displays are gaining traction. Since they are widely employed in EVFs and HMDs, they have outperformed traditional LCD and LCoS micro display technologies.

Growing investments in R&D Activities for product improvements

Many scientists anticipate that OLEDoS will eventually replace current display technology. As a result, a growing number of companies are engaging in research and development efforts linked to OLEDoS technology. OLEDoS technology-based displays are offered by Kopin Corporation and SeeYA Technology Corporation, among others.

Restraint

Number of side-effects caused by AR-based Gaming Devices

Health difficulties among gamers are on the rise, thanks to the introduction of AR-based gaming devices. AR games are extremely engaging and keep users interested for extended periods of time, leading to difficulties including anxiety, eye strain, obesity, and a lack of concentration. Since AR technology is immersive, it can cause anxiety or worry when worn for extended periods of time. AR devices expose consumers to dangerous electromagnetic frequency radiation, which can cause disease, in addition to stress.

Global Near-Eye Display Market: Key Players

Sony Group Corporation

Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis

Himax Technologies, Inc.

Kopin Corporation

eMagin Corporation

MICROOLED Technologies

BOE Technology Group Co., Ltd.

Syndiant, Inc.

Plessey

JBD Xianyao Display Technology

TriLite Technologies GmbH

Other Prominent Players

Global Near-Eye Display Market: Regions

Global Near-Eye Display Market is segmented based on regional analysis into five major regions: North America, Latin America, Europe, Asia Pacific and the Middle East and Africa. Due to the growing adoption of AR and VR technologies by the consumer and medical verticals, the near-eye display market in Asia Pacific is predicted to grow at the fastest CAGR. China's market growth can be ascribed to the fact that it is one of Asia Pacific's major consumer electronics marketplaces. The widespread availability of lightweight, low-cost near-eye display-based HMDs in Asia Pacific will encourage more enterprises in the region to invest in AR and VR HMDs. These reasons are expected to boost the near-eye display market's growth in the near future.

Impact of COVID-19 on Near-Eye Display Market

With the breakout of COVID-19, most manufacturers are focusing their efforts on developing microdisplays for medical applications in order to boost profits. Furthermore, manufacturers are actively involved in developing microdisplays, particularly for application in the healthcare industry.

Global Near-Eye Display Market is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States, Mexico, and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, and Rest of Europe

Asia Pacific Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, and Rest of Asia Pacific

Middle East and Africa Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, South Africa, and Rest of Middle East and Africa

The global Near-Eye Display Market report also contains analysis on:

Near-Eye Display Market Segments:

By Device Type

AR Devices

VR Devices

Others (EVF and MR Devices)

By Components

Image Generators
Optical Combiners
Imaging Optics
By Technology
TFT LCD
AMOLED
LCoS
OLEDOS
MicroLED
DLP
Laser Beam Scanning
By Vertical
Consumer
Automotive
Aerospace & Defense
Medical
Others (Education and Construction)
Near-Eye Display Market Dynamics
Near-Eye Display Market Size
Supply & Demand
Current Trends/Issues/Challenges
Competition & Companies Involved in the Market
Value Chain of the Market
Market Drivers and Restraints

Contents

1. EXECUTIVE SUMMARY

2. GLOBAL NEAR-EYE DISPLAY MARKET

- 2.1. Product Overview
- 2.2. Market Definition
- 2.3. Segmentation
- 2.4. Assumptions and Acronyms

3. RESEARCH METHODOLOGY

- 3.1. Research Objectives
- 3.2. Primary Research
- 3.3. Secondary Research
- 3.4. Forecast Model
- 3.5. Market Size Estimation

4. AVERAGE PRICING ANALYSIS

5. MACRO-ECONOMIC INDICATORS

6. MARKET DYNAMICS

- 6.1. Growth Drivers
- 6.2. Restraints
- 6.3. Opportunity
- 6.4. Trends

7. CORRELATION & REGRESSION ANALYSIS

- 7.1. Correlation Matrix
- 7.2. Regression Matrix

8. RECENT DEVELOPMENT, POLICIES & REGULATORY LANDSCAPE

9. RISK ANALYSIS

9.1. Demand Risk Analysis

9.2. Supply Risk Analysis

10. GLOBAL NEAR-EYE DISPLAY MARKET ANALYSIS

10.1. Porters Five Forces

10.1.1. Threat of New Entrants

10.1.2. Bargaining Power of Suppliers

10.1.3. Threat of Substitutes

10.1.4. Rivalry

10.2. PEST Analysis

10.2.1. Political

10.2.2. Economic

10.2.3. Social

10.2.4. Technological

11. GLOBAL NEAR-EYE DISPLAY MARKET

11.1. Market Size & forecast, 2020A-2031F

11.1.1. By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

11.1.2. By Volume (Million Units) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12. GLOBAL NEAR-EYE DISPLAY MARKET: MARKET SEGMENTATION

12.1. By Regions

12.1.1. North America:(U.S., Mexico, and Canada), By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12.1.2. Latin America: (Latin America), By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12.1.3. Europe: (Germany, UK, France, Rest of Europe), By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12.1.4. Asia-Pacific: (China, India, Japan, South Korea, Rest of Asia Pacific), By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12.1.5. Middle East and Africa: (North Africa, South Africa, Rest of Middle East and Africa), By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

12.2. By Device Type: Market Share (2020-2031F)

12.2.1. AR Devices, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F

- 12.2.2. VR Devices, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
- 12.2.3. Others (EVF and MR Devices), By Value (USD Million) 2020-2031F; Y-o-Y
Growth (%) 2021-2031F
- 12.3. By Components: Market Share (2020-2031F)
 - 12.3.1. Image Generators, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
 - 12.3.2. Optical Combiners, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
 - 12.3.3. Imaging Optics, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
- 12.4. By Technology: Market Share (2020-2031F)
 - 12.4.1. TFT LCD, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.2. AMOLED, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.3. LCoS, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.4. OLEDOS, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.5. MicroLED, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.6. DLP, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.4.7. Laser Beam Scanning, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
- 12.5. By Vertical: Market Share (2020-2031F)
 - 12.5.1. Consumer, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
 - 12.5.2. Automotive, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
 - 12.5.3. Aerospace & Defense, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%)
2021-2031F
 - 12.5.4. Medical, By Value (USD Million) 2020-2031F; Y-o-Y Growth (%) 2021-2031F
 - 12.5.5. Others (Education and Construction), By Value (USD Million) 2020-2031F; Y-o-
Y Growth (%) 2021-2031F

13. COMPANY PROFILE

- 13.1. Sony Group Corporation
 - 13.1.1. Company Overview
 - 13.1.2. Company Total Revenue (Financials)
 - 13.1.3. Market Potential
 - 13.1.4. Global Presence
 - 13.1.5. Key Performance Indicators

- 13.1.6. SWOT Analysis
- 13.1.7. Product Launch
- 13.2. Himax Technologies, Inc.
- 13.3. Kopin Corporation
- 13.4. eMagin Corporation
- 13.5. MICROOLED Technologies
- 13.6. BOE Technology Group Co., Ltd.
- 13.7. Syndiant, Inc.
- 13.8. Plessey
- 13.9. JBD Xianyao Display Technology
- 13.10. TriLite Technologies GmbH
- 13.11. Other Prominent Players

14. CONSULTANT RECOMMENDATION

14.1.1. The above given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

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