

Global Augmented and Virtual Reality (AR VR) Market in Aviation Size Study & Forecast, by Technology, Function, Component, Application and Regional Forecasts 2025-2035

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Abstracts

Global Augmented and Virtual Reality (AR VR) Market in Aviation is valued approximately at USD 3.12 billion in 2024 and is expected to grow with a soaring CAGR of 61.70% over the forecast period 2025–2035. The intersection of AR and VR technologies with aviation is ushering in an era of transformation, reshaping cockpit experiences, streamlining operations, and redefining training protocols with simulated precision and real-time immersive overlays. These advanced technologies are finding increasing favor among commercial and defense aviation stakeholders, as they offer unparalleled benefits in cost-effective pilot and crew training, enhanced maintenance visualization, and situational awareness during complex operations. Augmented Reality overlays are enabling real-time decision-making in-flight and on-ground, while Virtual Reality modules are replicating high-risk scenarios in safe environments—converging to build a more resilient, agile, and efficient aviation ecosystem.

The proliferation of smart cockpit solutions, growth in fleet modernization programs, and the intensifying global demand for pilot training programs are compelling aviation stakeholders to integrate AR and VR into their digital transformation roadmaps. Moreover, with aircraft complexity on the rise, these technologies offer a compelling solution for reducing turnaround time during inspections and upgrades by enabling intuitive 3D visualization. Notably, the increased emphasis on safety compliance and regulatory requirements is pushing airlines and defense aviation forces to adopt VR training modules for risk-free, repeatable mission rehearsal. The confluence of 5G technology, AI integration, and lightweight wearable devices is further unlocking new dimensions for real-time AR in aircraft navigation and airport ground operations.

Regionally, North America leads the AR VR adoption curve, driven by its strong aviation infrastructure, rapid deployment of defense simulation technologies, and active investments from tech-aviation crossovers like Boeing, Lockheed Martin, and Microsoft. Europe trails closely, bolstered by EASA-driven digital pilot training reforms and robust participation from AR-focused aviation startups. Meanwhile, the Asia Pacific region is projected to witness the fastest growth during the forecast period, spearheaded by China, Japan, and India—countries that are investing heavily in pilot training academies, MRO (maintenance, repair, and operations) digitalization, and next-gen passenger engagement experiences via immersive technology. This geographical spread underscores the global race toward digitally enhancing the aviation sector.

Major market player included in this report are:

Boeing

Microsoft Corporation

Lockheed Martin Corporation

Airbus S.A.S.

Thales Group

Magic Leap, Inc.

Collins Aerospace (Raytheon Technologies)

Elbit Systems Ltd.

Unity Technologies

CAE Inc.

Google LLC (Alphabet Inc.)

Honeywell International Inc.

Samsung Electronics Co., Ltd.

Vuzix Corporation

Oculus (Meta Platforms, Inc.)

Global Augmented and Virtual Reality (AR VR) Market in Aviation Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Technology:

Augmented Reality (AR)

Virtual Reality (VR)

By Function:

Training

Operations

By Component:

Hardware

Software

By Application:

On-Board

Off-Board

By Product:

(Sub-segments based on proprietary product classifications)

By Vertical:

(Segmented by specific verticals such as Commercial Aviation, Defense Aviation, MRO, etc.)

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL AUGMENTED AND VIRTUAL REALITY (AR VR) MARKET IN AVIATION REPORT SCOPE & METHODOLOGY

- 1.1. Research Objective
- 1.2. Research Methodology
 - 1.2.1. Forecast Model
 - 1.2.2. Desk Research
 - 1.2.3. Top-Down and Bottom-Up Approach
- 1.3. Research Attributes
- 1.4. Scope of the Study
 - 1.4.1. Market Definition
 - 1.4.2. Market Segmentation
- 1.5. Research Assumptions
 - 1.5.1. Inclusion & Exclusion
 - 1.5.2. Limitations
 - 1.5.3. Years Considered for the Study

CHAPTER 2. EXECUTIVE SUMMARY

- 2.1. CEO/CXO Standpoint
- 2.2. Strategic Insights
- 2.3. ESG Analysis
- 2.4. Key Findings

CHAPTER 3. GLOBAL AR VR MARKET IN AVIATION FORCES ANALYSIS

- 3.1. Market Forces Shaping the Global AR VR Market in Aviation (2024–2035)
- 3.2. Drivers
 - 3.2.1. Surging Demand for Cost-Efficient Pilot and Crew Training
 - 3.2.2. Fleet Modernization and Maintenance Turnaround Reduction
- 3.3. Restraints
 - 3.3.1. High Capital Expenditure for Hardware Deployment
 - 3.3.2. Data Privacy and Regulatory Compliance Challenges
- 3.4. Opportunities
 - 3.4.1. 5G-Enabled Real-Time AR Applications
 - 3.4.2. AI-Powered Predictive Maintenance and Simulation

CHAPTER 4. GLOBAL AR VR MARKET IN AVIATION INDUSTRY ANALYSIS

- 4.1. Porter's Five Forces Model
 - 4.1.1. Bargaining Power of Buyers
 - 4.1.2. Bargaining Power of Suppliers
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's Five Forces Forecast Model (2024–2035)
- 4.3. PESTEL Analysis
 - 4.3.1. Political
 - 4.3.2. Economic
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top Investment Opportunities
- 4.5. Top Winning Strategies (2025)
- 4.6. Market Share Analysis (2024–2025)
- 4.7. Global Pricing Analysis and Trends 2025
- 4.8. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL AR VR MARKET IN AVIATION SIZE & FORECASTS BY TECHNOLOGY 2025–2035

- 5.1. Market Overview
- 5.2. Augmented Reality (AR)
 - 5.2.1. Top Geographies Breakdown Estimates & Forecasts, 2024–2035
 - 5.2.2. Market Size Analysis, by Region, 2025–2035
- 5.3. Virtual Reality (VR)
 - 5.3.1. Top Geographies Breakdown Estimates & Forecasts, 2024–2035
 - 5.3.2. Market Size Analysis, by Region, 2025–2035

CHAPTER 6. GLOBAL AR VR MARKET IN AVIATION SIZE & FORECASTS BY FUNCTION 2025–2035

- 6.1. Market Overview
- 6.2. Training
 - 6.2.1. Top Geographies Breakdown Estimates & Forecasts, 2024–2035

- 6.2.2. Market Size Analysis, by Region, 2025–2035
- 6.3. Operations
 - 6.3.1. Top Geographies Breakdown Estimates & Forecasts, 2024–2035
 - 6.3.2. Market Size Analysis, by Region, 2025–2035

CHAPTER 7. GLOBAL AR VR MARKET IN AVIATION SIZE & FORECASTS BY REGION 2025–2035

- 7.1. Market, Regional Snapshot
- 7.2. Top Leading & Emerging Countries
- 7.3. North America AR VR Market in Aviation
 - 7.3.1. U.S. AR VR Market
 - 7.3.1.1. Technology Breakdown & Forecasts, 2025–2035
 - 7.3.1.2. Function Breakdown & Forecasts, 2025–2035
 - 7.3.2. Canada AR VR Market
 - 7.3.2.1. Technology Breakdown & Forecasts, 2025–2035
 - 7.3.2.2. Function Breakdown & Forecasts, 2025–2035
- 7.4. Europe AR VR Market in Aviation
 - 7.4.1. UK
 - ... (Technology & Function breakdowns)
 - 7.4.2. Germany
 - ...
 - 7.4.3. France
 - ...
 - 7.4.4. Spain
 - ...
 - 7.4.5. Italy
 - ...
 - 7.4.6. Rest of Europe
 - ...
- 7.5. Asia Pacific AR VR Market in Aviation
 - 7.5.1. China
 - ...
 - 7.5.2. India
 - ...
 - 7.5.3. Japan
 - ...
 - 7.5.4. Australia
 - ...

7.5.5. South Korea

...

7.5.6. Rest of Asia Pacific

...

7.6. Latin America

7.6.1. Brazil

...

7.6.2. Mexico

...

7.7. Middle East & Africa

7.7.1. UAE

...

7.7.2. Saudi Arabia

...

7.7.3. South Africa

...

CHAPTER 8. COMPETITIVE INTELLIGENCE

8.1. Top Market Strategies

8.2. Boeing

8.2.1. Company Overview

8.2.2. Key Executives

8.2.3. Company Snapshot

8.2.4. Financial Performance (Subject to Data Availability)

8.2.5. Product/Services Portfolio

8.2.6. Recent Developments

8.2.7. Market Strategies

8.2.8. SWOT Analysis

8.3. Microsoft Corporation

8.4. Lockheed Martin Corporation

8.5. Airbus S.A.S.

8.6. Thales Group

8.7. Magic Leap, Inc.

8.8. Collins Aerospace (Raytheon Technologies)

8.9. Elbit Systems Ltd.

8.10. Unity Technologies

8.11. CAE Inc.

8.12. Google LLC (Alphabet Inc.)

- 8.13. Honeywell International Inc.
- 8.14. Samsung Electronics Co., Ltd.
- 8.15. Vuzix Corporation
- 8.16. Oculus (Meta Platforms, Inc.)

List Of Tables

LIST OF TABLES

Table 1. Global AR VR Market in Aviation, Report Scope

Table 2. Global AR VR Market in Aviation, Estimates & Forecasts by Region, 2024–2035

Table 3. Global AR VR Market in Aviation, Estimates & Forecasts by Technology, 2024–2035

Table 4. Global AR VR Market in Aviation, Estimates & Forecasts by Function, 2024–2035

Table 5. Global AR VR Market in Aviation, Estimates & Forecasts by Component, 2024–2035

Table 6. Global AR VR Market in Aviation, Estimates & Forecasts by Application, 2024–2035

Table 7. North America AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

Table 8. U.S. AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

Table 9. Canada AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

Table 10. Europe AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

Table 11. UK AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

...

Table 20. Rest of Middle East & Africa AR VR Market in Aviation, Estimates & Forecasts, 2024–2035

List Of Figures

LIST OF FIGURES

- Fig 1. Global AR VR Market in Aviation, Research Methodology
- Fig 2. Global AR VR Market in Aviation, Market Estimation Techniques
- Fig 3. Global AR VR Market in Aviation, Market Size Estimates & Forecast Methods
- Fig 4. Global AR VR Market in Aviation, Key Trends 2025
- Fig 5. Global AR VR Market in Aviation, Growth Prospects 2024–2035
- Fig 6. Global AR VR Market in Aviation, Porter’s Five Forces Model
- Fig 7. Global AR VR Market in Aviation, PESTEL Analysis
- Fig 8. Global AR VR Market in Aviation, Value Chain Analysis
- Fig 9. AR VR Market in Aviation by Technology, 2025 & 2035
- Fig 10. AR VR Market in Aviation by Function, 2025 & 2035
- Fig 11. AR VR Market in Aviation by Component, 2025 & 2035
- Fig 12. AR VR Market in Aviation by Application, 2025 & 2035
- Fig 13. North America AR VR Market in Aviation, 2025 & 2035
- Fig 14. Europe AR VR Market in Aviation, 2025 & 2035
- Fig 15. Asia Pacific AR VR Market in Aviation, 2025 & 2035
- Fig 16. Latin America AR VR Market in Aviation, 2025 & 2035
- Fig 17. Middle East & Africa AR VR Market in Aviation, 2025 & 2035
- Fig 18. Global AR VR Market in Aviation, Company Market Share Analysis (2025)

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