

Global Data Recorder Market Size Study & Forecast, by Type, Technology, and Regional Forecasts 2025-2035

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Abstracts

Global Data Recorder Market is valued approximately at USD 1.9 billion in 2024 and is projected to expand at a steady CAGR of 4.64% over the forecast period 2025–2035. Data recorders, often referred to as black boxes, play a pivotal role in modern aviation and maritime sectors by capturing and preserving vital operational information, voice communications, and flight parameters. Their primary function is to enhance post-event investigations and drive regulatory compliance, but they've also become indispensable tools in predictive maintenance, aircraft fleet management, and real-time monitoring of performance and safety metrics. As the aerospace industry embraces digital transformation, the adoption of next-gen data recorders embedded with cloud computing capabilities and enhanced data analytics has accelerated significantly.

The surging complexity of modern aircraft systems and increasing emphasis on operational transparency are reshaping the dynamics of the global data recorder market. With the proliferation of advanced sensor technologies and AI-powered diagnostics, demand for flight data recorders (FDR), cockpit voice recorders (CVR), and voyage data recorders (VDR) has grown rapidly across both military and commercial sectors. According to recent industry data, there's also a notable trend toward miniaturization and integration of multi-function recorders in unmanned aerial vehicles (UAVs) and next-gen fighter jets. While regulatory mandates and global aviation safety protocols continue to propel adoption, the high cost of installation and storage constraints in legacy systems pose challenges. However, innovations in flash memory and solid-state storage technologies are swiftly overcoming these limitations.

From a regional perspective, North America dominates the data recorder market, underpinned by its thriving aviation ecosystem, robust regulatory framework led by FAA

and NTSB, and the presence of major OEMs and avionics companies. The U.S. remains at the forefront due to its vast defense spending and fleet modernization programs. Meanwhile, Europe is steadily advancing, with EASA compliance pushing widespread deployment of lightweight recorders across commercial airlines. Asia Pacific is anticipated to be the fastest-growing region, driven by the rapid expansion of commercial aviation in countries like China and India, rising defense budgets, and increased focus on air safety following high-profile incidents. Technological advancements in solid-state systems and government-led digital aviation initiatives further bolster regional market growth.

Major market player included in this report are:

Honeywell International Inc.

Curtiss-Wright Corporation

Teledyne Technologies Incorporated

Safran S.A.

Leonardo S.p.A.

L3Harris Technologies, Inc.

GE Aviation

FLIR Systems Inc.

Universal Avionics Systems Corporation

Garmin Ltd.

Airbus SE

Boeing Company

Collins Aerospace

Appareo Systems LLC

Hensoldt AG

Global Data Recorder Market 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 Type:

Data Logger

Cockpit Voice Recorder

Quick Access Recorder

Voyage Data Recorder

Flight Data Recorder

By Technology:

Cloud Computing

Solid State

Flash Card

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 DATA RECORDER MARKET 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 Assumption
 - 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 DATA RECORDER MARKET FORCES ANALYSIS

- 3.1. Market Forces Shaping the Global Data Recorder Market (2024–2035)
- 3.2. Drivers
 - 3.2.1. Stringent Safety & Regulatory Mandates
 - 3.2.2. Digital Transformation & Predictive Maintenance
- 3.3. Restraints
 - 3.3.1. High Installation & Compliance Costs
 - 3.3.2. Data Storage & Legacy System Constraints
- 3.4. Opportunities
 - 3.4.1. Advances in Solid-State & Cloud Storage
 - 3.4.2. Integration with AI-Enabled Analytics

CHAPTER 4. GLOBAL DATA RECORDER INDUSTRY ANALYSIS

- 4.1. Porter's 5 Forces Model
 - 4.1.1. Bargaining Power of Buyer
 - 4.1.2. Bargaining Power of Supplier
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 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 DATA RECORDER MARKET SIZE & FORECASTS BY TYPE 2025–2035

- 5.1. Market Overview
- 5.2. Global Data Recorder Market Performance – Potential Analysis (2025)
- 5.3. Data Logger
 - 5.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.3.2. Market Size Analysis, by Region, 2025–2035
- 5.4. Cockpit Voice Recorder
 - 5.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.4.2. Market Size Analysis, by Region, 2025–2035
- 5.5. Quick Access Recorder
 - 5.5.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 5.5.2. Market Size Analysis, by Region, 2025–2035
- 5.6. Voyage Data Recorder
- 5.7. Flight Data Recorder

CHAPTER 6. GLOBAL DATA RECORDER MARKET SIZE & FORECASTS BY TECHNOLOGY 2025–2035

- 6.1. Market Overview
- 6.2. Global Data Recorder Market Performance – Potential Analysis (2025)
- 6.3. Cloud Computing
 - 6.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 6.3.2. Market Size Analysis, by Region, 2025–2035
- 6.4. Solid State
 - 6.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
 - 6.4.2. Market Size Analysis, by Region, 2025–2035
- 6.5. Flash Card

CHAPTER 7. GLOBAL DATA RECORDER MARKET SIZE & FORECASTS BY REGION 2025–2035

- 7.1. Global Data Recorder Market, Regional Market Snapshot
- 7.2. Top Leading & Emerging Countries
- 7.3. North America Data Recorder Market
 - 7.3.1. U.S. Data Recorder Market
 - 7.3.1.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.3.1.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.3.2. Canada Data Recorder Market
 - 7.3.2.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.3.2.2. Technology Breakdown Size & Forecasts, 2025–2035
- 7.4. Europe Data Recorder Market
 - 7.4.1. UK Data Recorder Market
 - 7.4.1.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.4.1.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.4.2. Germany Data Recorder Market
 - 7.4.2.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.4.2.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.4.3. France Data Recorder Market
 - 7.4.3.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.4.3.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.4.4. Spain Data Recorder Market
 - 7.4.4.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.4.4.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.4.5. Italy Data Recorder Market

- 7.4.5.1. Type Breakdown Size & Forecasts, 2025–2035
- 7.4.5.2. Technology Breakdown Size & Forecasts, 2025–2035
- 7.4.6. Rest of Europe Data Recorder Market
- 7.5. Asia Pacific Data Recorder Market
 - 7.5.1. China Data Recorder Market
 - 7.5.1.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.5.1.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.5.2. India Data Recorder Market
 - 7.5.2.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.5.2.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.5.3. Japan Data Recorder Market
 - 7.5.3.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.5.3.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.5.4. Australia Data Recorder Market
 - 7.5.4.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.5.4.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.5.5. South Korea Data Recorder Market
 - 7.5.5.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.5.5.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.5.6. Rest of Asia Pacific Data Recorder Market
- 7.6. Latin America Data Recorder Market
 - 7.6.1. Brazil Data Recorder Market
 - 7.6.1.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.6.1.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.6.2. Mexico Data Recorder Market
- 7.7. Middle East & Africa Data Recorder Market
 - 7.7.1. UAE Data Recorder Market
 - 7.7.1.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.7.1.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.7.2. Saudi Arabia Data Recorder Market
 - 7.7.2.1. Type Breakdown Size & Forecasts, 2025–2035
 - 7.7.2.2. Technology Breakdown Size & Forecasts, 2025–2035
 - 7.7.3. South Africa Data Recorder Market

CHAPTER 8. COMPETITIVE INTELLIGENCE

- 8.1. Top Market Strategies
- 8.2. Honeywell International Inc.
 - 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 Port
- 8.2.6. Recent Development
- 8.2.7. Market Strategies
- 8.2.8. SWOT Analysis
- 8.3. Curtiss-Wright Corporation
- 8.4. Teledyne Technologies Incorporated
- 8.5. Safran S.A.
- 8.6. Leonardo S.p.A.
- 8.7. L3Harris Technologies, Inc.
- 8.8. GE Aviation
- 8.9. FLIR Systems Inc.
- 8.10. Universal Avionics Systems Corporation
- 8.11. Garmin Ltd.
- 8.12. Airbus SE
- 8.13. Boeing Company
- 8.14. Collins Aerospace
- 8.15. Appareo Systems LLC

List Of Tables

LIST OF TABLES

- Table 1. Global Data Recorder Market, Report Scope
- Table 2. Global Data Recorder Market Estimates & Forecasts by Region 2024–2035
- Table 3. Global Data Recorder Market Estimates & Forecasts by Type 2024–2035
- Table 4. Global Data Recorder Market Estimates & Forecasts by Technology 2024–2035
- Table 5. North America Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 6. U.S. Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 7. Canada Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 8. Europe Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 9. UK Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 10. Germany Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 11. France Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 12. Spain Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 13. Italy Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 14. Rest of Europe Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 15. Asia Pacific Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 16. China Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 17. India Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 18. Japan Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 19. Australia Data Recorder Market Estimates & Forecasts, 2024–2035
- Table 20. Rest of Asia Pacific Data Recorder Market Estimates & Forecasts, 2024–2035

List Of Figures

LIST OF FIGURES

- Fig 1. Global Data Recorder Market, Research Methodology
- Fig 2. Global Data Recorder Market, Market Estimation Techniques
- Fig 3. Global Data Recorder Market, Key Trends 2025
- Fig 4. Global Data Recorder Market, Growth Prospects 2024–2035
- Fig 5. Global Data Recorder Market, Porter’s Five Forces Model
- Fig 6. Global Data Recorder Market, PESTEL Analysis
- Fig 7. Global Data Recorder Market, Value Chain Analysis
- Fig 8. Data Recorder Market by Type, 2025 & 2035
- Fig 9. Data Recorder Market by Technology, 2025 & 2035
- Fig 10. North America Data Recorder Market, 2025 & 2035
- Fig 11. Europe Data Recorder Market, 2025 & 2035
- Fig 12. Asia Pacific Data Recorder Market, 2025 & 2035
- Fig 13. Latin America Data Recorder Market, 2025 & 2035
- Fig 14. Middle East & Africa Data Recorder Market, 2025 & 2035
- Fig 15. Global Data Recorder Market, Company Market Share Analysis (2025)

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