

eVTOL Aircraft Market Report by Lift Technology (Vectored Thrust, Multirotor, Lift Plus Cruise), Mode of Operation (Piloted, Autonomous, Semi-Autonomous), Maximum Take-off Weight (MTOW) (<250 Kg, 250-500 Kg, 500-1500 Kg, >1500 Kg), Range (0-200 Km, 200-500 Km), Propulsion Type (Battery-Electric, Hybrid-Electric, Hydrogen-Electric), Application (Commercial, Military, Emergency Medical Service), and Region 2024-2032

Market Report | 2024-08-10 | 150 pages | IMARC Group

AVAILABLE LICENSES:

- Electronic (PDF) Single User \$3899.00
- Five User Licence \$4899.00
- Enterprisewide License \$5899.00

Report description:

The global eVTOL aircraft market size reached US\$ 12.4 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 35.1 Billion by 2032, exhibiting a growth rate (CAGR) of 11.87% during 2024-2032. The growing demand for lighter and more aerodynamic designs, along with the development of advanced materials, rising demand for transportation that bypass ground-level traffic, and increasing preference for eco-friendly transportation alternatives to reduce carbon dioxide emissions are some of the major factors propelling the market.

An electric vertical takeoff and landing (eVTOL) aircraft is an innovative mode of transportation that utilizes electric propulsion systems to achieve vertical takeoff and landing capabilities. It is designed with multiple electric rotors or ducted fans that enable it to ascend and descend vertically. They offer efficient, environmentally friendly, and quiet aerial transportation options. As it is widely employed in various applications, such as urban air taxis, cargo delivery, and emergency medical services, the demand for eVTOL is rising worldwide.

At present, the increasing utilization of eVTOLs due to their enhanced convenience for commuting is bolstering the growth of the

market. Besides this, the growing demand for eVTOLs, as they offer lower operating costs compared to traditional helicopters, is offering a positive market outlook. In line with this, the rising popularity of on-demand air travel among individuals is propelling the growth of the market. Apart from this, the increasing preference for urban air mobility (UAM) to address mobility challenges and enhance connectivity is contributing to the growth of the market. Furthermore, advancements in battery technology to extend the range and endurance of eVTOL aircraft are supporting the growth of the market. Moreover, the increasing demand for quick travel options among individuals is strengthening the growth of the market.

eVTOL Aircraft Market Trends/Drivers:

Rising demand for transportation that bypass ground-level traffic

Urban congestion and traffic gridlock are becoming a pervasive issue in many metropolitan areas worldwide. In addition, the rising demand for transportation that bypasses ground-level traffic is bolstering the growth of the market. Apart from this, eVTOL aircraft can take off and land vertically, which means they can utilize existing infrastructure, such as helipads and vertiports, while also accessing more confined urban spaces. Moreover, it assists in reducing travel times and making commuting more efficient and enjoyable, which is offering a positive market outlook. In line with this, the rising adoption of eVTOLs to address the need for congestion relief and enhanced urban mobility is supporting the growth of the market.

Growing preference for eco-friendly transportation alternatives

The rising preference for eco-friendly transportation alternatives is propelling the growth of the market. In line with this, there is an increase in concerns over climate change and air pollution among the masses across the globe. Besides this, these aircraft are powered by electricity that produces zero emissions during flight while aligning with sustainability goals. In addition, they have a lower noise profile as compared to conventional helicopters. Governing agencies worldwide are encouraging the adoption of cleaner and greener transportation modes, which is offering a positive market outlook. Furthermore, advancements in battery technology are extending the range and efficiency of these aircraft, which makes them even more environmentally attractive. Increasing demand for lighter and more aerodynamic designs

Rapid technological advancements in these aircraft, such as electric propulsion, battery energy density, and autonomous flight systems, assist in providing a more viable transportation solution. Electric propulsion systems offer high efficiency and have low maintenance requirements as compared to traditional internal combustion engines. Moreover, the rising development of advanced materials to offer lighter and more aerodynamic eVTOL designs is bolstering the growth of the market. Simultaneously, autonomous flight technology is enhancing the safety and operational capabilities of aircraft, which is contributing to the growth of the market. As a result, these technological advancements assist in the manufacturing of reliable and cost-effective aircraft. eVTOL Aircraft Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels from 2024-2032. Our report has categorized the market based on lift technology, mode of operation, maximum take-off weight (MTOW), range, propulsion type, and application.

Breakup by Lift Technology:

- Vectored Thrust - Multirotor - Lift Plus Cruise

Multirotor accounts for the majority of the market share

The report has provided a detailed breakup and analysis of the market based on the lift technology. This includes vectored thrust, multirotor, and lift plus cruise. According to the report, multirotor represented the largest segment. Multirotor eVTOLs consist of multiple rotors, typically four or more, arranged in a symmetric fashion. They provide vertical lift that enables the aircraft to take off and land vertically, similar to a helicopter. They are known for their stability, agility, and ease of control, which makes them suitable for urban air mobility (UAM) applications, such as air taxis. In this, if one rotor or propulsion system encounters an issue, the others can compensate, which assists in enhancing safety. Additionally, they are often designed to be electrically powered to reduce emissions and noise pollution while aligning with sustainability goals.

Breakup by Mode of Operation: -[Piloted -[Autonomous -[Semi-Autonomous

Semi-autonomous holds the largest share

A detailed breakup and analysis of the market based on the mode of operation has also been provided in the report. This includes piloted, autonomous, and semi-autonomous. According to the report, semi-autonomous accounted for the largest market share. Semi-autonomous eVTOLs are designed to reduce the cognitive and operational workload on pilots or operators while still allowing for human intervention when needed. In a semi-autonomous eVTOL, various flight systems, such as navigation, stability control, and obstacle avoidance, are automated to enhance safety and ease of operation. These systems can assist in tasks like takeoff, landing, and maintaining stable flight. They offer a higher level of safety and ease of operation as compared to fully manual aircraft, which makes them suitable for a broader range of operators, including those with limited flight experience. This mode of operation strikes a balance between human expertise and the advantages of automation. Breakup by Maximum Take-off Weight (MTOW):

-[<250 Kg -[250-500 Kg -[500-1500 Kg -[>1500 Kg

<250 Kg represents the leading market segment

The report has provided a detailed breakup and analysis of the market based on the maximum take-off weight (MTOW). This includes <250 Kg, 250-500 Kg, 500-1500 Kg, and >1500 Kg. According to the report, <250 Kg represented the largest segment. eVTOLs with MTOW <250 Kg are characterized by their compact and lightweight design, making them ideal for various applications, especially those with specific weight constraints. These aircraft are often used for short-distance urban transportation, surveillance, and other tasks where maneuverability and agility are essential. They typically have shorter endurance and range as compared to their heavier counterparts. Their agility and ease of operation in confined spaces make them well-suited for urban air mobility (UAM) applications, including air taxis for short, intra-city journeys. Breakup by Range:

-[]0-200 Km -[]200-500 Km

200-500 Km exhibits a clear dominance in the market

A detailed breakup and analysis of the market based on the range has also been provided in the report. This includes 0-200 Km and 200-500 Km. According to the report, 200-500 Km accounted for the largest market share. eVTOLs with a range of 200-500 Kilometers are characterized by their ability to cover substantial distances on a single charge. This range category positions these aircraft as versatile solutions for various applications, such as regional transportation, intercity travel, and logistics. eVTOLs in this range typically feature advanced battery technology and aerodynamic design that enable them to travel efficiently over longer distances. Such aircraft are well-suited for connecting cities within a region or serving routes with moderate travel distances. Breakup by Propulsion Type:

-[]Battery-Electric

- Hybrid-Electric

- Hydrogen-Electric

Battery-electric dominates the market

The report has provided a detailed breakup and analysis of the market based on the propulsion type. This includes battery-electric, hybrid-electric, and hydrogen-electric. According to the report, battery-electric represented the largest segment.

Battery-electric eVTOLs are characterized by their use of rechargeable batteries as the primary source of power for electric motors. They produce zero emissions during operation and are quieter than traditional combustion engines, which assist in maintaining sustainability goals across the globe. These eVTOLs typically feature advanced lithium-ion or similar battery technologies, offering a balance between energy density, weight, and safety. The batteries are charged either through conventional electric grids or specialized charging infrastructure.

Breakup by Application: -[Commercial o[Air Taxi o[Delivery Drones -[Military o[Cargo Transport o[Combat Mission -[Emergency Medical Service o[Air Ambulance o[Medical Cargo Transport

Commercial is the predominant market segment

A detailed breakup and analysis of the market based on the application has also been provided in the report. This includes commercial (air taxi and delivery drones), military (cargo transport and combat mission), and emergency medical service (air ambulance and medical cargo transport). According to the report, commercial accounted for the largest market share. Commercial eVTOLs are characterized by their utilization for revenue-generating purposes, primarily involving passenger or cargo transportation services. These aircraft are designed and operated to meet commercial aviation standards and regulations. These aircraft provide on-demand point-to-point urban transportation services for passengers, alleviating traffic congestion and reducing travel times within densely populated cities. In addition, they play a crucial role in cargo delivery services by offering efficient and timely transportation of goods and packages, especially in congested urban areas. Breakup by Region:

- North America o[United States o∏Canada Asia-Pacific o∏China o∏Japan o∏India o
South Korea o

Australia o∏Indonesia o[]Others -[Europe o

Germany o
[France o[]United Kingdom o∏Italy o∏Spain o_[]Russia o[]Others - Latin America

o[Brazil o[Mexico o[Others -[Middle East and Africa

North America leads the market, accounting for the largest eVTOL aircraft market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America accounted for the largest market share.

North America held the biggest market share due to the presence of established aviation giants. Additionally, favorable government initiatives for cleaner transportation systems are offering a positive market outlook. Apart from this, the rising need for transportation solutions that address urban mobility challenges effectively is contributing to the growth of the market in the North America region. In addition, the increasing demand for convenient commuting options among individuals is propelling the growth of the market.

Competitive Landscape:

Key players are investing in research and development (R&D) activities to enhance the technology and performance of their aircraft. This includes improving battery technology, propulsion systems, aerodynamics, and autonomous flight capabilities. In addition, they are building and testing prototypes of the aircraft to validate their designs and performance. Apart from this, major manufacturers are conducting extensive flight testing and simulations to ensure safety and reliability. In line with this, companies are working closely with aviation authorities to develop and certify their aircraft, creating a pathway for safe and legal operations. Furthermore, some companies are investing in the development of infrastructure required for the operations of aircraft, such as the construction of vertiports, charging stations, and ground support equipment.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

- -[]Airbus SE
- -[Archer Aviation Inc.
 -[Beta Technologies
 -[Guangzhou EHang Intelligent Technology Co. Ltd
 -[Lift Aircraft Inc.
 -[Lilium GmbH
 -[Moog Inc.
 -[Piasecki Aircraft Corporation
 -[Pipistrel d.o.o Ajdovscina
 -[Vertical Aerospace Group Ltd.
 -[Volocopter GmbH
 -[Wisk Aero LLC
- Xti Aircraft Company

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.) Recent Developments:

-[In May 2023, Lilium and Air-Dynamic SA signed an agreement that includes pre-delivery payments for up to five of Lilium?s eVTOL aircraft.

-[In 2023, Volocopter, the pioneer of Urban Air Mobility (UAM), and Safran Electrical & Power, one of the world?s leaders in aircraft electrical systems, signed an agreement to develop a next generation power train for electric vertical takeoff and landing (eVTOL) aircraft.

-[In October 2022, Wisk Aero revealed its 6th-generation air taxi, an autonomous electric vertical take-off and landing (eVTOL)

aircraft that is designed to carry passengers up to 90 miles. The company claims that this vehicle is the first autonomous eVTOL to be a candidate for certification by the Federal Aviation Administration.

Key Questions Answered in This Report

- 1. How big is the global eVTOL aircraft market?
- 2. What is the expected growth rate of the global eVTOL aircraft market during 2024-2032?
- 3. What are the key factors driving the global eVTOL aircraft market?
- 4. What has been the impact of COVID-19 on the global eVTOL aircraft market?
- 5. What is the breakup of the global eVTOL aircraft market based on the lift technology?
- 6. What is the breakup of the global eVTOL aircraft market based on the mode of operation?
- 7. What is the breakup of the global eVTOL aircraft market based on the Maximum Take-off Weight (MTOW)?
- 8. What is the breakup of the global eVTOL aircraft market based on the range?
- 9. What is the breakup of the global eVTOL aircraft market based on the propulsion type?
- 10. What is the breakup of the global eVTOL aircraft market based on the application?
- 11. What are the key regions in the global eVTOL aircraft market?
- 12. Who are the key players/companies in the global eVTOL aircraft market?

Table of Contents:

- 1 Preface
- 2 Scope and Methodology
- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
- 2.3.1 Primary Sources
- 2.3.2 Secondary Sources
- 2.4 Market Estimation
- 2.4.1 Bottom-Up Approach
- 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology
- 3 Executive Summary
- 4 Introduction
- 4.1 Overview
- 4.2 Key Industry Trends
- 5 Global eVTOL Aircraft Market
- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast
- 6 Market Breakup by Lift Technology
- 6.1 Vectored Thrust
- 6.1.1 Market Trends
- 6.1.2 Market Forecast
- 6.2 Multirotor
- 6.2.1 Market Trends
- 6.2.2 Market Forecast
- 6.3 Lift Plus Cruise

6.3.1 Market Trends 6.3.2 Market Forecast 7 Market Breakup by Mode of Operation 7.1 Piloted 7.1.1 Market Trends 7.1.2 Market Forecast 7.2 Autonomous 7.2.1 Market Trends 7.2.2 Market Forecast 7.3 Semi-Autonomous 7.3.1 Market Trends 7.3.2 Market Forecast 8 Market Breakup by Maximum Take-off Weight (MTOW) 8.1 <250 Kg 8.1.1 Market Trends 8.1.2 Market Forecast 8.2 250-500 Kg 8.2.1 Market Trends 8.2.2 Market Forecast 8.3 500-1500 Ka 8.3.1 Market Trends 8.3.2 Market Forecast 8.4 >1500 Kg 8.4.1 Market Trends 8.4.2 Market Forecast 9 Market Breakup by Range 9.1 0-200 Km 9.1.1 Market Trends 9.1.2 Market Forecast 9.2 200-500 Km 9.2.1 Market Trends 9.2.2 Market Forecast 10 Market Breakup by Propulsion Type 10.1 Battery-Electric 10.1.1 Market Trends 10.1.2 Market Forecast 10.2 Hybrid-Electric 10.2.1 Market Trends 10.2.2 Market Forecast 10.3 Hydrogen-Electric 10.3.1 Market Trends 10.3.2 Market Forecast 11 Market Breakup by Application 11.1 Commercial 11.1.1 Market Trends 11.1.2 Key Segments 11.1.2.1 Air Taxi

11.1.2.2 Delivery Drones 11.1.3 Market Forecast 11.2 Military 11.2.1 Market Trends 11.2.2 Key Segments 11.2.2.1 Cargo Transport 11.2.2.2 Combat Mission 11.2.3 Market Forecast 11.3 Emergency Medical Service 11.3.1 Market Trends 11.3.2 Key Segments 11.3.2.1 Air Ambulance 11.3.2.2 Medical Cargo Transport 11.3.3 Market Forecast 12 Market Breakup by Region 12.1 North America 12.1.1 United States 12.1.1.1 Market Trends 12.1.1.2 Market Forecast 12.1.2 Canada 12.1.2.1 Market Trends 12.1.2.2 Market Forecast 12.2 Asia-Pacific 12.2.1 China 12.2.1.1 Market Trends 12.2.1.2 Market Forecast 12.2.2 Japan 12.2.2.1 Market Trends 12.2.2.2 Market Forecast 12.2.3 India 12.2.3.1 Market Trends 12.2.3.2 Market Forecast 12.2.4 South Korea 12.2.4.1 Market Trends 12.2.4.2 Market Forecast 12.2.5 Australia 12.2.5.1 Market Trends 12.2.5.2 Market Forecast 12.2.6 Indonesia 12.2.6.1 Market Trends 12.2.6.2 Market Forecast 12.2.7 Others 12.2.7.1 Market Trends 12.2.7.2 Market Forecast 12.3 Europe 12.3.1 Germany

12.3.1.1 Market Trends

12.3.1.2 Market Forecast 12.3.2 France 12.3.2.1 Market Trends 12.3.2.2 Market Forecast 12.3.3 United Kingdom 12.3.3.1 Market Trends 12.3.3.2 Market Forecast 12.3.4 Italy 12.3.4.1 Market Trends 12.3.4.2 Market Forecast 12.3.5 Spain 12.3.5.1 Market Trends 12.3.5.2 Market Forecast 12.3.6 Russia 12.3.6.1 Market Trends 12.3.6.2 Market Forecast 12.3.7 Others 12.3.7.1 Market Trends 12.3.7.2 Market Forecast 12.4 Latin America 12.4.1 Brazil 12.4.1.1 Market Trends 12.4.1.2 Market Forecast 12.4.2 Mexico 12.4.2.1 Market Trends 12.4.2.2 Market Forecast 12.4.3 Others 12.4.3.1 Market Trends 12.4.3.2 Market Forecast 12.5 Middle East and Africa 12.5.1 Market Trends 12.5.2 Market Breakup by Country 12.5.3 Market Forecast 13 SWOT Analysis 13.1 Overview 13.2 Strengths 13.3 Weaknesses 13.4 Opportunities 13.5 Threats 14 Value Chain Analysis 15 Porters Five Forces Analysis 15.1 Overview 15.2 Bargaining Power of Buyers 15.3 Bargaining Power of Suppliers 15.4 Degree of Competition 15.5 Threat of New Entrants 15.6 Threat of Substitutes

16 Price Analysis 17 Competitive Landscape 17.1 Market Structure 17.2 Key Players 17.3 Profiles of Key Players 17.3.1 Airbus SE 17.3.1.1 Company Overview 17.3.1.2 Product Portfolio 17.3.1.3 Financials 17.3.1.4 SWOT Analysis 17.3.2 Archer Aviation Inc. 17.3.2.1 Company Overview 17.3.2.2 Product Portfolio 17.3.2.3 Financials 17.3.3 Beta Technologies 17.3.3.1 Company Overview 17.3.3.2 Product Portfolio 17.3.4 Guangzhou EHang Intelligent Technology Co. Ltd 17.3.4.1 Company Overview 17.3.4.2 Product Portfolio 17.3.5 Lift Aircraft Inc. 17.3.5.1 Company Overview 17.3.5.2 Product Portfolio 17.3.6 Lilium GmbH 17.3.6.1 Company Overview 17.3.6.2 Product Portfolio 17.3.6.3 Financials 17.3.7 Moog Inc. 17.3.7.1 Company Overview 17.3.7.2 Product Portfolio 17.3.7.3 Financials 17.3.7.4 SWOT Analysis 17.3.8 Piasecki Aircraft Corporation 17.3.8.1 Company Overview 17.3.8.2 Product Portfolio 17.3.9 Pipistrel d.o.o Ajdovscina 17.3.9.1 Company Overview 17.3.9.2 Product Portfolio 17.3.10 Vertical Aerospace Group Ltd. 17.3.10.1 Company Overview 17.3.10.2 Product Portfolio 17.3.11 Volocopter GmbH 17.3.11.1 Company Overview 17.3.11.2 Product Portfolio 17.3.12 Wisk Aero LLC 17.3.12.1 Company Overview 17.3.12.2 Product Portfolio

17.3.13 Xti Aircraft Company

17.3.13.1 Company Overview

17.3.13.2 Product Portfolio



eVTOL Aircraft Market Report by Lift Technology (Vectored Thrust, Multirotor, Lift Plus Cruise), Mode of Operation (Piloted, Autonomous, Semi-Autonomous), Maximum Take-off Weight (MTOW) (<250 Kg, 250-500 Kg, 500-1500 Kg, >1500 Kg), Range (0-200 Km, 200-500 Km), Propulsion Type (Battery-Electric, Hybrid-Electric, Hydrogen-Electric), Application (Commercial, Military, Emergency Medical Service), and Region 2024-2032

Market Report | 2024-08-10 | 150 pages | IMARC Group

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Electronic (PDF) Single User	\$3899.00
	Five User Licence	\$4899.00
	Enterprisewide License	\$5899.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346. []** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	Phone*	
First Name*	Last Name*	
Job title*		

Company Name*	EU Vat / Tax ID / NIP number*	
Address*	City*	
Zip Code*	Country*	
	Date	2025-06-24
	Signature	