

Aircraft Engine Market Forecasts to 2032 – Global Analysis By Type (Turbofan Engine, Turboprop Engine, Turboshaft Engine, Piston Engine), Platform, Component, Power Rating, Technology, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aircraft Engine Market is accounted for \$88.2 billion in 2025 and is expected to reach \$158.3 billion by 2032 growing at a CAGR of 8.7% during the forecast period. An aircraft engine is a propulsion system designed to generate thrust that powers an aircraft through the air. These engines convert fuel into mechanical energy, enabling flight by driving propellers or producing jet thrust. Common types include turbofan, turbojet, turboprop, and piston engines, and each suited to specific aircraft categories. Aircraft engines are engineered for high performance, reliability, and fuel efficiency, often incorporating advanced materials and technologies to withstand extreme conditions. They play a critical role in determining an aircraft's speed, range, and operational cost. Continuous innovation in engine design supports safer, cleaner, and more efficient air travel across commercial and military aviation.

Market Dynamics:

Driver:

Rising Air Passenger Traffic

The surge in global air passenger traffic is a key driver for the aircraft engine market. As more people opt for air travel due to affordability, convenience, and expanding tourism, airlines are increasing fleet sizes and upgrading engines to meet demand. This growth fuels the need for efficient, reliable propulsion systems that support higher flight

frequencies and longer routes. Emerging markets, especially in Asia-Pacific, are witnessing rapid aviation expansion, further accelerating engine demand across commercial and regional aircraft segments. Thus, it drives the growth of the market.

Restraint:

High Development & Manufacturing Costs

Aircraft engine development involves extensive R&D, precision engineering, and advanced materials, making it a capital-intensive process. High costs associated with design, testing, certification, and manufacturing pose a significant restraint for market growth. These expenses are compounded by stringent regulatory standards and the need for continuous innovation. Smaller manufacturers often struggle to compete, limiting market entry. Additionally, fluctuating raw material prices and labor costs further challenge profitability, especially in regions with limited aerospace infrastructure or skilled workforce availability.

Opportunity:

Technological Advancements

Technological advancements present a major opportunity in the market. Innovations in hybrid-electric propulsion, additive manufacturing, and lightweight composite materials are transforming engine design. These breakthroughs enhance fuel efficiency, reduce emissions, and improve performance under extreme conditions. Smart engine systems with predictive maintenance capabilities are also gaining traction. As sustainability becomes a priority, next-generation engines are being developed to meet environmental standards while lowering operational costs. These advancements open new avenues for both commercial and military aviation sectors.

Threat:

Supply Chain Disruptions

Global supply chain disruptions pose a serious threat to the aircraft engine market. Delays in sourcing critical components, raw materials, and specialized parts can hinder production timelines and increase costs. Geopolitical tensions, trade restrictions, and pandemic-related shutdowns have exposed vulnerabilities in the aerospace supply network. Dependence on a limited number of suppliers for high-precision parts further

exacerbates risks. Manufacturers are now exploring localized sourcing and digital supply chain solutions to mitigate these threats and ensure business continuity.

Covid-19 Impact:

The COVID-19 pandemic severely impacted the aircraft engine market, causing a sharp decline in air travel and aircraft deliveries. Lockdowns, travel restrictions, and reduced passenger demand led to order cancellations and deferred maintenance schedules. Engine manufacturers faced production halts and workforce shortages. However, the crisis also accelerated innovation in cleaner propulsion technologies and digital maintenance solutions. As the industry recovers, renewed focus on sustainability and resilience is reshaping engine development strategies, with long-term growth expected to rebound post-pandemic.

The exhaust system segment is expected to be the largest during the forecast period

The exhaust system segment is expected to account for the largest market share during the forecast period, due to its critical role in engine performance and emissions control. Advanced exhaust systems enhance thrust efficiency, reduce noise, and manage thermal output, contributing to overall aircraft reliability. Increasing regulatory pressure for cleaner emissions has driven innovation in exhaust technologies, especially in commercial aviation. As engine designs evolve, demand for high-performance exhaust components is rising, making this segment a key contributor to market expansion.

The electric engine segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the electric engine segment is predicted to witness the highest growth rate, due to global push for sustainable aviation. Electric propulsion offers reduced carbon emissions, lower operating costs, and quieter flight operations. Technological advancements in battery systems, power electronics, and lightweight materials are enabling the development of viable electric aircraft for short-haul and urban mobility. Governments and aerospace companies are investing heavily in electric engine R&D, positioning this segment as a transformative force in future aviation.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, due to rapid economic growth, expanding middle-class population, and

increasing air travel demand. Countries like China, India, and Southeast Asian nations are investing in aviation infrastructure and fleet modernization. Regional airlines are boosting procurement of fuel-efficient aircraft, driving engine sales. Additionally, the presence of major manufacturing hubs and favorable government policies support the region's dominance in the global engine market.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to robust R&D capabilities, strong defense spending, and a mature aviation ecosystem. The region is home to leading engine manufacturers and aerospace innovators driving technological breakthroughs. Rising demand for next-generation engines in both commercial and military sectors, coupled with supportive regulatory frameworks and sustainability initiatives, is accelerating growth. The push for electric and hybrid propulsion systems further strengthens North America's market momentum.

Key players in the market

Some of the key players in Aircraft Engine Market include General Electric Aviation, Rolls-Royce Holdings plc, Pratt & Whitney, Safran Aircraft Engines, CFM International, MTU Aero Engines, Honeywell Aerospace, IAE International Aero Engines AG, Engine Alliance, Williams International, Klimov, Hindustan Aeronautics Limited (HAL), Avio Aero, Motor Sich and Aero Engine Corporation of China (AECC).

Key Developments:

In June 2025, Airbus and MTU Aero Engines signed a Memorandum of Understanding at the Paris Airshow to advance hydrogen fuel cell propulsion for aviation. This collaboration aims to develop a fully electric, hydrogen-powered aircraft, leveraging Airbus's ZEROe initiative and MTU's Flying Fuel Cell concept.

In March 2025, MTU Maintenance Zhuhai and All Nippon Airways (ANA) have signed a contract for the maintenance, repair, and overhaul (MRO) of the airline's CFM56-7B engines. The agreement extends their longstanding partnership and underscores MTU's expertise in narrowbody engine services. This collaboration ensures the continued reliability and performance of ANA's fleet of Boeing 737NG aircraft.

Types Covered:

Turbofan Engine

Turboprop Engine

Turboshaft Engine

Piston Engine

Platforms Covered:

Fixed-Wing Aircraft

Rotary-Wing Aircraft

Unmanned Aerial Vehicles (UAVs)

Components Covered:

Compressor

Turbine

Combustion Chamber

Fan

Gearbox

Exhaust System

Fuel System

Power Ratings Covered:

Less than 10,000 lbf

10,000–20,000 lbf

20,000–30,000 lbf

Above 30,000 lbf

Technologies Covered:

Conventional Engine

Hybrid Engine

Electric Engine

End Users Covered:

OEM (Original Equipment Manufacturer)

Aftermarket

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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