

# **Asia Pacific Rocket Hybrid Propulsion Market Size study, by Type (Rocket Motor, Rocket Engine) by Orbit (Low Earth Orbit (LEO), Medium Earth Orbit (MEO), Geostationary Earth Orbit (GEO), Beyond Geosynchronous Orbit (BGEO)), by Component (Motor Casing, Nozzle, Igniter Hardware, Turbo Pump, Propellant, Others) by Vehicle Type (Manned, Unmanned) by End User (Military and Government, Commercial) and Country Forecasts 2022-2032**

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## **Abstracts**

Asia Pacific Rocket Hybrid Propulsion Market is valued at approximately USD 1.53 billion in 2023 and is anticipated to grow with a healthy growth rate of more than 9.99 % over the forecast period 2024-2032. Rocket hybrid propulsion is a type of rocket engine technology that combines elements of both solid and liquid propulsion systems. This hybrid approach utilizes a solid fuel and a liquid or gaseous oxidizer, bringing together the advantages of both propulsion methods while mitigating some of their respective disadvantages. The fuel in a hybrid rocket is stored in a solid state. Common materials include rubber-like substances such as hydroxyl-terminated polybutadiene (HTPB), paraffin, or other polymers. The fuel is typically contained within the combustion chamber. The rise in demand for small satellites and CubeSats has led to the development of smaller, more efficient hybrid propulsion systems. Moreover, hybrid rockets are tailored to provide economical launch options for these smaller payloads, which are often used for communication, Earth observation, and scientific research.

The Asia Pacific region is experiencing a surge in demand for rocket hybrid propulsion systems, primarily fueled by the growing environmental awareness in the aerospace

industry. With concerns over climate change and sustainability on the rise, there is a strong push towards adopting eco-friendly technologies across various sectors, including space exploration. For instance, in December 2023, ISRO (Indian Space Research Organization) announced that it has tested a hybrid motor that led to the development of a new propulsion system for next launch vehicles. Furthermore, hybrid propulsion systems offer a capable solution by using propellants that are less harmful to the environment compared to traditional rocket fuels. This aligns with the environmental regulations and sustainability goals of many countries in the Asia Pacific region. Additionally, the region's burgeoning space industry is increasingly prioritizing green propulsion solutions to minimize ecological impact while advancing space exploration initiatives. As a result, there is a growing preference for rocket hybrid propulsion technology among space agencies, commercial space companies, and research institutions in the Asia Pacific. Therefore, these factors drive demand and fostering innovation in environmentally sustainable space propulsion systems across the Asia Pacific Rocket Hybrid Propulsion Market. However, integration complexity and a higher manufacturing cost of rocket hybrid propulsion stifle market growth during the forecast period 2024-2032.

The key Countries considered for the Asia Pacific Rocket Hybrid Propulsion market study include China, India, Japan, South Korea, Australia and Rest of Asia Pacific. In 2023, China was the largest regional market in terms of revenue. China has made substantial investments in its space program, with a focus on developing indigenous technologies, including rocket propulsion systems. Government support and funding facilitate research, development, and deployment of hybrid propulsion technologies. Moreover, Chinese space agencies, research institutions, and aerospace companies are actively engaged in research and development of hybrid propulsion systems, which is expected to provide various growth opportunities for the market growth during the forecast period. This includes exploring novel fuel formulations, combustion technologies, and propulsion architectures to enhance performance and reliability. Whereas, the market in India is expected to develop at the fastest rate over the forecast period.

Major market players included in this report are:

China Aerospace Science and Technology Corporation

Indian Space Research Organisation (ISRO)

Innospace

Company 4

Company 5

Company 6

Company 7  
Company 8  
Company 9  
Company 10

The detailed segments and sub-segment of the market are explained below:

By Type

Rocket Motor  
Rocket Engine

By Orbit

Low Earth Orbit (LEO)  
Medium Earth Orbit (MEO)  
Geostationary Earth Orbit (GEO)  
Beyond Geosynchronous Orbit (BGEO)

By Component

Motor Casing  
Nozzle  
Igniter Hardware  
Turbo Pump  
Propellant  
Others

By Vehicle Type

Manned  
Unmanned

By End User

Military and Government  
Commercial

By Region:

Asia Pacific  
China  
India  
Japan  
Australia

South Korea  
RoAPAC

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and country 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

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