

# Space-Based RF & Microwave Technology Market - A Global and Regional Analysis: Focus on Platform, Application, End User, Component, Frequency and Country - Analysis and Forecast, 2021-2031

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# **Abstracts**

Market Report Coverage - Space-Based RF & Microwave Technology

Market Segmentation

Platforms - Space-based platforms and Ground-based platforms

Application – Communication, Earth Observation, Navigation/GPS, Technology Development, and Others

End User - Government and Military, Logistics, Media and Telemetry, Oil and Gas, Environmental and Monitoring, and Others

Component - TRM (Transmitter/Receiver Module), Amplifier, RF Switches, RF Cables, FPGA/IC, and Others

Frequency - Very-High Frequency (VHF) (30MHz-300MHz), Ultra-High Frequency (UHF) (301MHz-3GHz), Super-High Frequency (SHF) (4GHz-30GHz), and Extremely-High Frequency (EHF) (31GHz-300GHz)

Regional Segmentation

North America - U.S. and Canada



Europe - U.K., France, Germany, Russia, Rest-of-Europe

Asia-Pacific - China, Japan, India, and Rest-of-Asia-Pacific

Rest-of-the-World

#### Market Growth Drivers

Rising Demand for Satellite Communication Systems

Rising Usage of CubeSats and Other Cost-Effective Satellite Solutions

# Market Challenges

Market Access Restriction and Spectrum Allocation Problems

Export and Investment Challenges

#### Market Opportunities

Commercial Business Opportunities within New Space

**Key Companies Profiled** 

ASELSAN A.?., Airbus S.A.S., Cobham Limited, General Dynamics Mission Systems, Inc., Honeywell International Inc., HUBER+SUHNER AG, Kongsberg, L3Harris Technologies, Inc., Leonardo S.p.A, Mitsubishi Electric Corporation, Microchip Technology Inc, Teledyne Technologies, Thales Group, and TTI Norte S.L. (TTI).

How This Report Can Add Value

Product/Innovation Strategy

The product segment helps the readers in understanding the different types of space-

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based microwave & RF components and their market potential globally. Moreover, the study provides the readers a detailed understanding of the platforms on which they are integrated, their applications, and the frequency on which they operate. Additionally, comprehensive coverage on components and application of the global space-based RF & microwave technology market has also been added to the study.

# Growth/Marketing Strategy

Players operating in the global space-based RF & microwave technology market are developing innovative products to enhance the capabilities of their product offerings. Growth/marketing strategies will help the readers understand the revenue-generating strategies adopted by the players operating in the global space-based RF & microwave technology market. For instance, in April 2021, the company announced the expansion of its radiation-hardened arm microcontroller (MCU) family for space systems. The microcontroller is based on system-on-chip (SoC) commercial off-the-shelf (COTS) to rad-hard scalable solutions with the addition of embedded analog capabilities. Moreover, other strategies adopted by the market players will help the readers make strategic decisions, such as go-to-market strategies.

# Competitive Strategy

Players analyzed and profiled in the study involve original equipment manufacturers (OEMs) and component providers that capture a maximum share in the global space-based RF & microwave technology market. Moreover, a detailed competitive benchmarking of the players operating in the global space-based RF & microwave technology market has been done that will help the readers to understand how players stack against each other, presenting a clear market landscape. Additionally, comprehensive competitive strategies such as partnerships, agreements, and collaborations will aid the readers in understanding the untapped revenue pockets in the market.

# Key questions answered in the Report

What are the upcoming trends in the global space-based RF & microwave technology market across different regions?

What are the major driving forces expected to increase the demand for satellite connectivity during the forecast period 2021-2031?



What are the major challenges inhibiting the growth of the global space-based RF & microwave technology market?

What was the revenue generated in the global space-based RF & microwave technology market by various segments in 2020, and what are the estimates by 2031?

Which end user of the space-based RF & microwave technology market (government and military, logistics, media and telemetry, oil and gas, and environment and monitoring) is expected to dominate the market in the coming years?

What is the estimated revenue to be generated by the global space-based RF & microwave technology market across different regions (North America, Europe, Asia-Pacific, and Rest-of-the-World) during the forecast period?

Who are the key players in the global space-based RF & microwave technology market, and what are the new strategies that they are adopting to make a mark in the industry?

What major opportunities do the space-based RF & microwave technology market companies foresee in the next ten years?

What is the competitive strength of the key leading players in the global spacebased RF & microwave technology market?

Space-Based RF & Microwave Technology Market

Laser communication has been a notable frontier as an alternate to RF systems, but the practical applications of laser communication are still a challenge with no feasible solution. The latest trend in the global space-based RF & microwave technology market is software-defined reconfigurable components, additive manufacturing processes, and increasing usage of higher frequencies. These trends will eventually lead to the versatility of components, reduction in testing and development cost, and high data transfer rates, respectively.

Space-Based RF & Microwave Technology Industry Overview



The technological advancement in terms of size, reliability, transfer rate, and power consumption are driving the global space-based RF & microwave technology market. In addition, the introduction of new private players and increasing government and institutional funding within the space domain help generate market opportunities.

The global space-based RF & microwave technology market is estimated to reach \$14,015.8 million in 2031, at a compound annual growth rate (CAGR) of 7.26% during the forecast period 2021-2031. The major driving factor of the market can be gauged by increasing space budgets by major countries for establishing a secure military and commercial space communication network.

Market Segmentation

Space-Based RF & Microwave Technology Market by Platform

The global space-based RF & microwave technology market has been segmented based on platforms including space-based platforms and ground-based platforms. The space-based platforms segment consisting of satellites, launch vehicles, and other manmade celestial objects like deep space probes and exploration rovers. The satellite segment within the space-based platforms is expected to dominate the global space-based RF & microwave technology market, on account of a major focus toward establishing satellite constellations for high-speed data transfer rates.

Space-Based RF & Microwave Technology Market by Application

The global space-based RF & microwave technology market has been segmented based on application, including communication, earth-observation, navigation/GPS, technology development. The communication application is expected to be the front runner in the global space-based RF & microwave technology market, mainly to cater to the rising market demand for the end user to have a stable and high-speed data connection. Furthermore, the emergence of a fifth-generation network and the approach taken by industry players to cater to end users directly instead of passing network distribution centers would drive the market and generate new opportunities.

Space-Based RF & Microwave Technology Market by End User

The global space-based RF/microwave technology market has been segmented based on end users, including government and military, logistics, media and telemetry, oil and gas, environment and monitoring. The government and military segment is estimated to



dominate the global space-based RF/microwave technology market, owing to its requirement to use satellite networks for various military, surveillance, and communication activities. In addition, a secure and stable high-speed communication network is required to ensure safe operations have allowed nations to place their individual communication systems in space and establish a private network. This initiative has spurred market opportunities within the global space-based RF & microwave technology market.

Space-Based RF & Microwave Technology Market by Region

The global space-based RF & microwave technology market has been segmented based on region, including North America, Europe, Asia-Pacific, and Rest-of-the-World. North America is expected to account for the highest share of the global space-based RF & microwave technology market. This is due to a significant number of companies based in the region, and increased spending by government organizations such as NASA on the procurement of RF components for space applications.

Key Market Players and Competition Synopsis

Some of the key companies operating in the market include ASELSAN A.?., Airbus S.A.S., General Dynamics Mission Systems, Inc., Honeywell International Inc., HUBER+SUHNER AG, Kongsberg, L3Harris Technologies, Inc., Leonardo S.p.A, Mitsubishi Electric Corporation, Microchip Technology Inc, Teledyne Technologies, Thales Group, and TTI Norte S.L. (TTI).

The companies that are profiled in the report have been selected post undergoing indepth interviews with experts and understanding details around companies such as product portfolio, annual revenues, market penetration, research and development initiatives, and domestic and international presence in the space-based RF & microwave technology industry.



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