Nano and Microsatellite - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2017 - 2029

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Report description:

The Nano and Microsatellite Market size is estimated at USD 3.04 billion in 2024, and is expected to reach USD 4.94 billion by 2029, growing at a CAGR of 10.20% during the forecast period (2024-2029).

LEO Satellites Are Leading Market Demand

- During launch, a satellite or spacecraft is usually placed into one of many special orbits around the Earth, or it can be launched into an interplanetary journey. There are basically three types of Earth orbits, namely geostationary orbit (GEO), medium Earth orbit, and low Earth orbit. Many weather and communication satellites tend to have high Earth orbits, which are farthest from the surface. Satellites in medium Earth orbit include navigational and specialized satellites that are designed to monitor a specific area. Most science satellites, including NASA's Earth Observation System, are in low Earth orbit.
- The nano and microsatellite market is experiencing strong growth, driven by the growing demand for LEO satellites, which are used for communication, navigation, Earth observation, military reconnaissance, and scientific missions. Between 2017 and 2022, around 2,900 small LEO satellites were manufactured and launched from North America alone, primarily for communication applications. This has led companies such as SpaceX, OneWeb, and Amazon to plan the launch of thousands of satellites into LEO.
- In recent years, the military's use of MEO and GEO satellites has grown due to their advantages, including increased signal strength, improved communications and data transfer capabilities, and greater coverage area. For instance, Raytheon Technologies' and Boeing's Millennium Space Systems are developing the first prototype Missile Track Custody (MTC) MEO OPIR payloads to detect and track hypersonic missiles for the US Space Force.

Asia-Pacific will witness significant growth

- The global nano and microsatellite market is expected to grow significantly in the coming years, driven by increasing demand for high-speed internet, communication services, and data transfer across different industries. The market can be analyzed concerning North America, Europe, and Asia-Pacific, the major regions in terms of market share and revenue generation. During 2017-2022*, more than 800 nano and microsatellites were manufactured and launched by various operators in this segment.
- North America is expected to dominate the global geo satellite market due to several leading market players in the region, such as Planet Labs, Swarm Technologies, and SpaceX. The US government has also invested heavily in developing advanced satellite technology, which is expected to drive market growth in North America further. During 2017-2022*, the region accounted for 61% of the total nano and microsatellites manufactured.
- The nano and microsatellite market in Europe is expected to grow significantly due to the increasing demand for high-speed internet and communication services. The European Space Agency (ESA) has been investing heavily in developing advanced satellite technology, which is expected to further drive market growth in the region. During 2017-2022*, the region accounted for 5% of the total nano and microsatellites manufactured and launched.
- Asia-Pacific is expected to witness significant growth in the nano and microsatellite market due to the increasing demand for satellite-based communication services and navigation systems in countries such as China, India, and Japan.

Global Nano and Microsatellite Market Trends

Rising need for better fuel and operational efficiency boosting market growth

- The satellite manufacturing industry is driven by the demand for satellites in a plethora of applications, ranging from military surveillance, communications, and navigation to Earth observation. The level of sophistication required for manufacturing satellites is very high, and hence, the market is more prominent in technologically advanced nations, such as the United States, Russia, China, France, and Japan.
- The advent of small and nanosatellites has radically affected the satellite manufacturing market. Satellite manufacturers are exploring opportunities to enhance their production processes. In order to meet the aggressive delivery schedules for satellites, in 2022, RUAG Group announced that it was adopting technologies from other industries to augment its satellite production capacity. Boeing is also focusing on integrating technologies prevalent in the aircraft manufacturing industry to bolster its satellite programs. Both companies have integrated automation in their satellite production lines to boost their annual output and adopted a multi-sourcing strategy for certain commercial off-the-shelf (COTS) components to reduce lead time.
- Satellites are classified according to mass. Satellites with a mass between 10 kg and 100 kg are considered microsatellites, while satellites between 1 and 10 kg are considered nanosatellites. Around 1,200 small satellites were launched globally during 2017-2022. There is a growing interest in small satellites because of their shorter development time, which can reduce overall mission costs. These satellites have made it possible to significantly reduce the time required to obtain scientific and technological results.

Increasing space expenditure by different agencies are expected to positively impact the nano and microsatellites categories

- The advent of small and nanosatellites has strongly influenced the satellite manufacturing market. Satellite manufacturers are exploring opportunities to improve their manufacturing processes. Governments worldwide are investing in small satellite

technology for various purposes, including scientific research, environmental monitoring, and national security. The level of complexity required to manufacture satellites is very high, and thus, the market is larger in countries with advanced technologies, such as the United States, Russia, China, France, and Japan.
- In North America, global government expenditure for space programs hit a record of approximately USD 103 billion in 2021. The region is the epicenter of space innovation and research, with the presence of the world's biggest space agency, NASA. In 2022, the US government spent nearly USD 62 billion on its space programs, making it the highest spender on space in the world. In the United States, federal agencies such as NASA receive aid from the government every year, known as funding. In 2023, NASA received USD 32.33 billion for its subsidiaries.
- In Europe, the UK Space Agency announced that it would be funding EUR 6.5 million to support 18 projects to boost the UK space industry. The funding will stimulate growth in the UK space industry by supporting high-impact, locally-led schemes and space cluster development managers. The 18 projects are expected to pioneer a range of innovative space technologies to combat local issues, such as by utilizing Earth observation (EO) data to enhance public services. In November 2022, the Government of Spain announced that it would allocate EUR 1.5 billion to the European Space Agency over the next five years, aimed at reinforcing Spain's leadership in space.

Nano and Microsatellite Industry Overview

The Nano and Microsatellite Market is fragmented, with the top five companies occupying 35.53%. The major players in this market are Axelspace Corporation, China Aerospace Science and Technology Corporation (CASC), ICEYE Ltd., LeoStella and Planet Labs Inc. (sorted alphabetically).

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 EXECUTIVE SUMMARY & KEY FINDINGS

2 REPORT OFFERS

3 INTRODUCTION
3.1 Study Assumptions & Market Definition
3.2 Scope of the Study
3.3 Research Methodology

4 KEY INDUSTRY TRENDS
4.1 Satellite Mass
4.2 Spending On Space Programs
4.3 Regulatory Framework
4.3.1 Global
4.3.2 Australia
4.3.3 Brazil
4.3.4 Canada
4.3.5 China
4.3.6 France

4.3.7 Germany
4.3.8 India
4.3.9 Iran
4.3.10 Japan
4.3.11 New Zealand
4.3.12 Russia
4.3.13 Singapore
4.3.14 South Korea
4.3.15 United Arab Emirates
4.3.16 United Kingdom
4.3.17 United States
4.4 Value Chain & Distribution Channel Analysis

5 MARKET SEGMENTATION (includes market size in Value in USD, Forecasts up to 2029 and analysis of growth prospects)
5.1 Application
5.1.1 Communication
5.1.2 Earth Observation
5.1.3 Navigation
5.1.4 Space Observation
5.1.5 Others
5.2 Orbit Class
5.2.1 GEO
5.2.2 LEO
5.2.3 MEO
5.3 End User
5.3.1 Commercial
5.3.2 Military & Government
5.3.3 Other
5.4 Propulsion Tech
5.4.1 Electric
5.4.2 Gas based
5.4.3 Liquid Fuel
5.5 Region
5.5.1 Asia-Pacific
5.5.2 Europe
5.5.3 North America
5.5.4 Rest of World

6 COMPETITIVE LANDSCAPE
6.1 Key Strategic Moves
6.2 Market Share Analysis
6.3 Company Landscape
6.4 Company Profiles (includes Global Level Overview, Market Level Overview, Core Business Segments, Financials, Headcount, Key Information, Market Rank, Market Share, Products and Services, and Analysis of Recent Developments).
6.4.1 Astrocast
6.4.2 Axelspace Corporation
6.4.3 Capella Space Corp.

6.4.4 China Aerospace Science and Technology Corporation (CASC)
6.4.5 German Orbital Systems
6.4.6 GomSpaceApS
6.4.7 ICEYE Ltd.
6.4.8 LeoStella
6.4.9 Planet Labs Inc.
6.4.10 Satellogic
6.4.11 SpaceQuest Ltd

7 KEY STRATEGIC QUESTIONS FOR SATELLITE CEOS

8 APPENDIX
8.1 Global Overview
8.1.1 Overview
8.1.2 Porter's Five Forces Framework
8.1.3 Global Value Chain Analysis
8.1.4 Market Dynamics (DROs)
8.2 Sources & References
8.3 List of Tables & Figures
8.4 Primary Insights
8.5 Data Pack
8.6 Glossary of Terms

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