Autonomous BVLOS Drones - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Autonomous BVLOS Drones Market size is estimated at USD 1.06 billion in 2024, and is expected to reach USD 3.03 billion by 2029, growing at a CAGR of 23.26% during the forecast period (2024-2029).

Key Highlights
-The autonomous BVLOS drone market witnessed unprecedented challenges due to the COVID-19 pandemic. The advancement of the pandemic led to the closing of borders by various countries as well as the implementation of lockdowns. This affected the supply chain and prevented manufacturers from receiving raw materials which were required for the production of autonomous BVLOS drone systems, which ultimately led to a decline in the production of BVLOS drone systems.
-Moreover, with various companies laying off employees, the necessary manpower required for production was affected during the pandemic. On the other hand, the market showed a strong recovery post-COVID owing to increasing demand by various defense forces as well as commercial companies around the world who make use of autonomous BVLOS drone systems to carry out various operations, and this will lead to the autonomous BVLOS drones market witnessing a positive outlook and market growth during the forecast period.
-Drones and unmanned aerial vehicles have experienced dynamic technological advancements over the last few decades. The technological advancement in operating range, capabilities, and size largely paves the way for various growth opportunities for the defense and commercial sectors. Moreover, as the drone operators robustly expand their BVLOS operations to cater to the demand of various end-users, such as commercial and military, a surge in revenues from contractual operations is envisioned to occur for the market players during the forecast period.

Autonomous BVLOS Drones Market Trends

Military Segment is Anticipated to Grow with the Highest CAGR During the Forecast Period

- The military segment is expected to show significant growth during the forecast period. The main factors which are attributable to such a growth include an increase in the defense budget of various countries and the growing demand for autonomous BVLOS drones by the defense personnel of various countries to carry out beyond line-of-sight military operations.
- The military sector deploys autonomous UAVs for various purposes like aerial warfare and ISR applications. Currently, in addition to the existing drones, governments and companies are working on integrating advanced technologies like artificial intelligence. The revenues have also been higher from the military segment, as military forces around the globe mostly use large UAVs with higher unit prices. In addition to the existing models of autonomous BVLOS drones, the companies are expanding their product portfolio through investments in the development of new drone models. For instance, in January 2021, the Japanese government announced its plan to develop an indigenous combat drone, which is planned to enter service by 2035. The drone is planned to be developed in three stages and operate autonomously. Japan's Acquisition, Technology, and Logistics Agency is working on the development of UAV's artificial intelligence (AI), and government plans to invest about JPY 2.7 billion (USD 26.2 million) in the development of the UAV.
- The usage of autonomous BVLOS drones in the military will increase their capabilities for carrying out precise and accurate strikes. These drones can also be used to locate and target enemy camps and vehicles, allowing for a more effective and targeted attack which reduces the risk of civilian casualties and collateral damage.
- Moreover, autonomous BVLOS drones are also being used to gather intelligence and monitor enemy activity and movements, thereby allowing for the development of more effective strategies and tactics. In addition, autonomous BVLOS drones have also changed the way militaries deploy troops. Autonomous BVLOS UAVs can provide troops with a better understanding of the battlefield, as well as accurate real-time data on enemy movements, allowing for more efficient and safe deployments.
- Thus, the growing need for autonomous BVLOS drones by various defense forces around the world to carry out complex military activities, coupled with increasing investments and development of advanced autonomous BVLOS drones for the military by various market players, will lead to a positive outlook and market growth for autonomous BVLOS drones in the military segment during the forecast period.

Asia-Pacific Will Showcase Remarkable Growth During the Forecast Period

- Asia-Pacific is projected to show the highest growth during the forecast period. The main factor behind this growth is the increasing usage of autonomous BVLOS drones in the commercial and military sectors for carrying out various beyond line-of-sight activities and the increasing investments in terms of research and development of advanced BVLOS autonomous drones by major market players in the country. This will lead to an increase in market growth in the coming years.
- China, currently, is witnessing an increase in terms of autonomous drones. There have been growing investments by major companies in China in developing technologically advanced autonomous drones. Currently, various Chinese firms have increased their investments in terms of research for the development of autonomous BVLOS drone systems with advanced capabilities. India is also witnessing significant growth in terms of the development of autonomous drones. Since the last few years, the Indian defense forces have stepped up the procurement of unmanned aerial vehicles (UAVs) or drones, primarily for the purposes of surveillance, reconnaissance, target acquisition, logistics, and precision strikes. Moreover, there have been growing developments regarding the usage of autonomous BVLOS drones in the medical sector. Companies such as Marut Drones are increasing their research and development for advanced autonomous BVLOS drones, which are able to deliver medical supplies to hard-to-reach areas. Moreover, in recent times, autonomous BVLOS drones are also gaining significant traction in India, and with increased technological benefits, such drones are now becoming a part of Make in India and also encourage business development in India. New developments in terms of autonomous BVLOS drones have made it possible for such drones to fly long distances carrying

heavy payloads.
- Furthermore, there are several developments that are going on in India currently in order to increase the capabilities of autonomous BVLOS drones. For instance, in August 2021, ANRA Technologies announced that they had conducted 100 hours of Beyond Visual Line of Sight drone delivery flights in India and have supported a project which was initiated by the Directorate General of Civil Aviation (DGCA). Moreover, the goal of the project included data collection, which will help the Indian regulatory process as government stakeholders prepare the next set of drone rules for BVLOS operations.
- Various other countries in the Asia-Pacific region are also witnessing immense development in terms of autonomous BVLOS drone systems. Advanced Autonomous BVLOS drone systems are now being developed in the rest of Asia-Pacific countries to carry out various activities such as reservoir monitoring and advanced UAV operations, among others. For instance, in July 2021, Singapore's National Water Agency (PUB) announced that they would start using autonomous Beyond Visual Line of Sight (BVLOS) drones to monitor water quality at six reservoirs across the city-state. The drones will be fitted with remote sensing technology and cameras for real-time video data, which will help detect aquatic plant overgrowth and poor water quality based on levels of algae concentration. In addition, the drones will also send live alerts to PUB officers via their mobile devices, enabling them to respond immediately. Alerts include illegal fishing in non-designated areas and vessel overcrowding. Thus, the surge in use cases will also drive the demand for automated BVLOS drones during the forecast period.

Autonomous BVLOS Drones Industry Overview

The autonomous BVLOS drone market is fragmented in nature, with various players holding significant shares in the market. Some prominent market players are Airbus SE, AeroVironment, Inc., Elbit Systems Ltd., General Atomics, and The Boeing Company, amongst others.

The key players in the market are focusing on the development of the advanced autonomous BVLOS market with advanced capabilities in order to further improve its beyond-line-of-sight capabilities. Growing expenditure on research and development towards manufacturing advanced autonomous BVLOS drone systems for both the military and commercial sectors will lead to creating better opportunities soon. Moreover, various manufacturers are now integrating technologies, like advanced Lidar sensors as well as terrain mapping, and this is expected to support the growth of the autonomous BVLOS drone market during the forecast period.

Additional Benefits:

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

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