Airport Robots - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 110 pages | Mordor Intelligence

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Report description:

The Airport Robots Market size is estimated at USD 0.9 billion in 2024, and is expected to reach USD 1.91 billion by 2029, growing at a CAGR of 16.41% during the forecast period (2024-2029).

Various airports worldwide are making use of robots that are helping airport officials interact with passengers and provide assistance at the airport. Moreover, airports across the world are engaged in conducting trials with robots in terms of providing information, guidance, and entertainment solutions to passengers. Additionally, robots have been introduced for cleaning, as well as security services. The increasing number of robots being used in airports worldwide is likely to drive the growth of the market in the future. The introduction of advanced technology robots to improve airport services is expected to lead to enhanced customer experience in the years to come.

The development of technologically innovative solutions to replace obsolete systems at airports is a primary goal for airport systems and equipment manufacturers. Furthermore, airport officials are looking forward to the building of smart airports, a project being pursued by several nations. The high expenses of manufacture, installation, and maintenance of airport robots have hampered industry growth. However, the increasing adoption of Artificial Intelligence (AI), as well as chatbots, for handling airline bookings and queries is expected to have a significant impact on market prospects in the future.

Airport Robots Market Trends

Airport Security Segment Dominates Market Share

Currently, the airport security segment has the highest share among all the segments. Airport security is one of the biggest

concerns faced by airport officials worldwide. The rise in terrorism across the world has led to airport officials taking extra precautions and being highly focused on airport security. To prevent any unwanted incidents, airports around the world have taken a step further and have started the testing of autonomous robots, which is expected to help security officials provide adequate security at the airport.

For instance, Airports, such as Hamad International Airport and La Guardia Airport, have started deploying security robots to provide the next level of airport security. The robots come equipped with an in-built facial recognition system, cameras, and sensors. They can measure pulse rate remotely and, thus, detect suspicious persons, credit cards, fake currencies, abandoned objects, and explosives without disturbing the passenger flow at the airport terminal. New upcoming airports are anticipated to be technology-oriented to streamline passenger traffic and ensure safety at critical junctures of the airport infrastructure. On this note, in December 2022, Knightscope Inc., a prominent creator of autonomous security robots, was awarded a contract to provide airport robots to an airport in New Jersey. More such contracts are anticipated to be awarded in the future.

Asia-Pacific to Register Highest Growth During the Forecast Period

The ongoing airport infrastructure development programs in Asia-Pacific outpace other regions, and the rapid increase in air passenger traffic has driven the adoption of smart technologies and automation, including airport robots. China is one of the fastest-growing air travel markets. According to the International Air Transport Association (IATA), China is set to displace the US as the world's largest aviation market by the mid-2020s. The rebalancing of China's economy is likely to support strong passenger demand over the long term. For instance, in July 2021, Singapore Changi Airport deployed Avidbots Neo floor robot cleaners developed by Avidbots Corp. to enhance the productivity of their cleaning teams and reduce costs. The Avidbots Neo is a purpose-built floor scrubbing robot integrated with navigation technology, sensors, and software with elegant hardware.

Similarly, in October 2021, Kansai Airports announced that it deployed Secom Robot X2, an autonomous patrolling robot, at Terminal 2 of Kansai International Airport (KIX) and the airport's railway station. The new surveillance robot can autonomously navigate patrol routes using a laser sensor to identify its location and monitor various areas at the airport. Also, in June 2022, Coimbatore Airport in India undertook a trial project with AI-enabled robots for a six-month timeframe. During the same timeframe, Bengaluru International Airport also introduced ten AI-powered support robots to improve passenger experience. To improve its operations and customer experience, the Airport Authority of India utilized artificial intelligence (AI) enabled robots for the first time in Bangalore airport to facilitate its services for travelers. Such deployments render a positive outlook for market growth in the region.

Airport Robots Industry Overview

The airport robot market is moderately consolidated, with only a handful of players controlling the market. LG Electronics Inc., Stanley Robotics, SITA, CYBERDYNE Inc., and OMRON Corporation are the leading players in the market. The companies have been engaged in various initiatives and product innovations, which have led them to strengthen their presence in the market. For instance, in August 2022, Vistara (TATA SIA Airlines Limited) created an Artificial intelligence (AI) robot, "RADA," to interact with passengers. RADA has effective features like a boarding pass scan, providing information about the terminal, weather conditions of the destination city, real-time flight status, and departure gates. Similarly, in June 2023, ADR Ventures, the new Corporate Venture Capital arm of Aeroporti di Roma (ADR), a Corporate Partner of the FTE Digital, Innovation & Business Hub, announced its first venture investment in Ottonomy, a deep tech business that provides contactless deliveries with completely autonomous robots. Following a successful proof of concept (PoC) in the Innovation Hub at Rome Fiumicino Airport during the accelerator program, the autonomous delivery project became part of ADR's long-term strategy aimed at maintaining the highest levels of service and enhancing passengers' experiences through the use of cutting-edge technology and innovation.

Additional Benefits:

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

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