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Aircraft Computers Market Research Report - Global Forecast till 2030

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Description:

Aircraft Computers Market Overview

Aircraft Computers Market is projected to USD 8.7 Billion register at a CAGR of 6.7% during the forecast 2022 to 2030

Aircraft computers are utilized to perform various essential operations in the aviation industry which include designing the aircraft, controlling the engine and utilities, and significant others. Especially the aircraft computers are used in integrating key features in the military aircraft.

As the aircraft computers are performing major functions, they are considered as the neutral and center of the aircraft. These computers are responsible for key operations such as take-off, cruise, descent, and significant others. The efficient flight management systems make the pilot the aviation driver comfortable and enhance the flight experience. Therefore the key market players are investing in the growth of the industry and the development of these components such as aircraft actuators, cockpit controls, flight control computers, and trim actuators are bolstering the overall growth of the aircraft computers industry.

COVID 19 Analysis:

The aircraft computers market ecosystem has been changing in recent years during the varying requirement and the growing development in the industry. However, the pandemic has reduced the demand for the aircraft industry. The reduction in the production units and the designing teams has significantly impacted the market growth in recent times.

Market Dynamics:

Market Drivers

The aircraft computers are capable of carrying out several significant operations such as flight management, engine efficiency, utility management, mission control, and significant others. Such factors are considered as the major drivers of aircraft computers market growth.

The presence of varied types of advanced computers such as flight augmentation computers, flight guidance computers, flight director computers, air data computers, and central maintenance computers make flying efficient and fuel-efficient as well. The pilots don’t have to put so much effort during the flight. Such factors are considered as the major drivers of aircraft computers market growth.

Market Opportunities:

The growing demand across the commercial, military, para-military, and civil services are expected to boost the overall growth of the aircraft computers industry during the forecast period. The leading aviation operations and industries are investing towards the growth of the technologies and thereby propelling the overall growth of the aircraft computers industry.

The key manufacturers are inclined towards advancing and modernizing the aircraft fleets and the end-users are quite aware of the key operations that are performed by the aircraft computers such as designing airplanes, controlling the in-flight operations, ensuring safety, and significant others. Such factors are expected to bolster the overall growth of the industry during the forecast period.

Market Restraints:

The increasing number of cyber-attacks and the stringent regulations imposed by the government authorities to enhance the safety of the passengers required higher quality products and thereby considered as the major restraint of aircraft computers market growth.

The requirement of integration of the software with the hardware is higher as these components might not work or function properly without the integration and thereby hindering the performance of

the aircraft computers. Such factors are considered as the major restraints of the aircraft computers market growth.

Market Challenges:

The malfunctioning of the software solutions during the flight and the efficient control of the engine and the utilities are considered as the major challenge for the overall growth of the aircraft computers industry. The rising demand to increase the safety of the passengers and to reduce the workload for the pilot is considered a major challenge for the manufacturers.

The increasing number of aircraft applications and the increasing number of deliveries across the globe are becoming the major challenge for the aircraft computers market growth. The requirement of higher capital and decreasing military expenditures are becoming a challenge for the aircraft computers market growth.

Cumulative Growth Analysis:

The market value of the aircraft computers industry was at USD 5470.7 million in the year 2020 and is expected to surpass the market value of USD 7106.9 million by the year 2027 while registering a CAGR of 3.4% during the forecast period. The growth of the aircraft computers industry is influenced by the growing demand for mission computers across the globe. Since these mission computers are capable of carrying out advanced technologies such as general-purpose I/O, video, and voice processing operations efficiently, they are increasingly adopted across the industry. Similarly, the increasing usage of helicopters, especially for the civil and military services and other medical emergency services during natural disasters and other situations are propelling the demand for rotator wings and thereby propelling the overall growth of the industry in recent times.

The demand for the military and commercial services are increasingly adopting the unmanned aerial vehicles and thereby showcases higher demand to avoid the unmanned aerial traffic and also requires enhancement in the navigation capabilities. Such factors are propelling the overall growth of the aircraft computers industry in recent times.

Value Chain Analysis:

The aircraft computers market growth is highly influenced by the increasing utilization of computers in the aerospace industry and the growing demand for electronic systems and modernization of aircraft fleets. The leading market players are bringing in new developments in the industry as well. For instance, one of the leading market players, Honeywell had introduced a new compact system that is utilized in urban air vehicles which is named “fly-by-wire” which ensures possible failures that control the failures and recovers the aircraft seamlessly. The demand for stabilized flying is higher across the industry and this invention has offered the capacity, especially for unmanned vehicles.

The crucial factors such as advanced computers and controls for monitoring and other engine operations are carried out by the engine controls carried out by the advanced computers in the industry. Similarly, advanced computers are used in utility controls due to the increasing demand for fuel management, central maintenance, and display management. Since the demand for these critical aspects is higher the aircraft computers market demand is expected to grow during the forecast period.

Segment Overview:

Based on end-user:

- OEM
- Aftermarket
- Based on Type:
- Flight Controls
- Flight Management Computers
- Engine Controls
- Utility Controls
- Mission Computers

Based on Platform:

- Fixed Wing
- Rotary Wing
- UAV

Based on Component:

- Hardware
- Software

The commercial front report had stated that China is expected to hold the largest aviation market by 2025 and India is expected to grow as the world's third-largest aviation market and other countries in the Asia-pacific region are expected to hold the top 10 positions in the aviation market. Such reports are expected to drive the aircraft computers market growth during the forecast period. Also, the favorable economic condition across Asia-pacific has helped the region in attaining ever-growing passenger traffic. Even in the year 2019, the region has reached and acquired about 411 narrow-bodied aircraft and 160 wide-bodied aircraft with various OEMs.

The developed countries like China and India are procuring new aircraft to enhance their military prowess and to immediately respond to their security threats and carry out critical and dangerous strategic missions across the country. Therefore the countries are procuring modern fighter aircraft and the ones that possess advanced autopilot systems and flight computers that offer excellent situational awareness to the pilots.

Competitive Landscape:

- Boeing (US)
- Bombardier Inc. (Canada)
- GE Aviation (US)
- Kontron S&T AG (Germany)
- General Dynamics Mission Systems, Inc. (US)
- Garmin Ltd. (US)
- BAE Systems (UK)
- Cobham Limited (UK)
- Curtiss-Wright Corporation (US)
- Esterline Technologies (US)

Recent Developments:

In the year 2021, one of the leading market players, Garmin Ltd had announced that their product GFC 500 had received certification from the federal aviation administration, and hence it can be used in various aircrafts such as Beechcraft 19 sport, Beechcraft 23 musketeer, or sundowner, Beechcraft 24 musketeer and sierra aircraft models as well.

In the year 2022, one of the leading market players, Microsoft Flight simulator piper had announced tomahawk which features 4096 X 4096 PBR materials which also includes passenger doors and cockpit windows, sun visors, and significant other facilities. Tablet EFB is used to control various aircraft options and adjust the options such as cold and dark, Ready for takeoff, ready for the start.

Report Overview:

This report has covered:

- Market overview
- COVID 19 Analysis
- Market dynamics
- Cumulative growth analysis
- Value chain analysis
- Segment overview
- Regional analysis
- Competitive landscape
- Recent developments

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