Aircraft Autopilot System - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 120 pages | Mordor Intelligence

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Report description:

Aircraft Autopilot System Market Analysis

The aircraft autopilot system market is valued at USD 5.82 billion in 2025 and is forecast to reach a market size of USD 7.81 billion by 2030, registering a 6.06% CAGR over 2025-2030. This trajectory reflects the sector's pivot toward higher levels of cockpit automation as regulators, airlines, and defense agencies prepare for single-pilot commercial operations and wider unmanned flight adoption. Sustained recovery in commercial aviation, large order backlogs, and avionics modernization programs collectively reinforce demand, while artificial-intelligence-driven contingency management solutions unlock new platform opportunities. Leaders focus on software-defined architectures that extend system life cycles and enable over-the-air feature upgrades. Supply chain constraints in inertial sensors and rising cybersecurity compliance costs remain near-term pressure points. Yet, resilient capital spending by North American and Asia-Pacific operators keeps the aircraft autopilot system market on an expansion path.

Global Aircraft Autopilot System Market Trends and Insights

Rising Commercial Aircraft Deliveries

Boeing's plan to raise B737 output toward 42 jets a month and Airbus's intent to reach 75 A320-family units monthly underpin a steady production ramp that lifts autopilot installations. Asia-Pacific carriers drive a sizable share of these commitments, ensuring that integrated flight management and autopilot suites remain line-fit priorities. Suppliers expand manufacturing capacity for flight control computers and servo actuators to keep pace. The aircraft autopilot system market benefits directly because every

forward-fit narrow-body or wide-body requires a certified digital autopilot with growth margins for future software features. The production outlook stabilizes revenue visibility for tier-one avionics vendors through 2030.

Growing Demand for Advanced Flight Automation

The FAA's More Pilots, More Aircraft, Simplified Certification (MOSAIC) framework paves the way for aircraft that rely on automation layers to guard against loss of control, accelerating the adoption of high-authority autopilots. Airlines specify weather-linked guidance, satellite-based augmentation, and integrated datalink functions to trim workload on congested routes. Academic research highlights digital flight assistants that contextualize sensor data and present actionable cues, reinforcing the value proposition of enhanced automation. These capabilities expand the aircraft autopilot system market as buyers transition from legacy rate-based systems to attitude-based, AI-supported solutions.

High Certification and Compliance Costs

The FAA's System Safety Assessments rule mandates exhaustive verification to ensure catastrophic failure probabilities remain below 1 □ 10-9 per flight hour, driving software validation budgets into the USD 5-15 million range per program. DO-178C Level-A compliance requires multiple independent reviews and full code coverage, extending schedules by up to two years. Smaller innovators in the aircraft autopilot system industry often partner with primes to navigate these hurdles, which keeps market entry barriers high and consolidates share among incumbents.

Other drivers and restraints analyzed in the detailed report include:

Fleet-wide Avionics Modernization Programs / AI-enabled Contingency-management Autopilots / Cyber-security Vulnerabilities in Flight-control Links /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Flight Control Computers retained 36.55% of the aircraft autopilot system market share in 2024 because every commercial transport class aircraft mandates triple-redundant processing for pitch, roll, yaw, and speed commands. Conversely, Autopilot Software Suites are expanding at a 9.45% CAGR as operators shift toward cloud-updateable logic bundles that overlay predictive algorithms on existing hardware. Thales's PureFlyt platform illustrates this pivot by optimizing real-time trajectories for fuel and noise benefits. The aircraft autopilot system market size for software-centric solutions is projected to reach USD 2.1 billion by 2030, mirroring broader aerospace digitalization. Hardware components like servo actuators and attitude sensors remain essential, yet margins migrate to proprietary code, differentiating approach, go-around, and emergency modes. Vendors invest in DevSecOps pipelines that shorten certification cycles and permit rapid deployment of AI functions, reinforcing the competitive importance of software road maps.

The second paragraph of analysis underscores the modularity trend. Airlines prefer line-replaceable units that isolate processing from I/O boards, allowing capability upgrades without deep mechanical changes. Open-architecture standards such as FACE in defense aviation and ARINC 653 in civil transport encourage cross-vendor interoperability, expanding addressable volume for niche software developers. As a result, new entrants leverage subscription-based licensing models, while established integrators bundle software warranties with extended service agreements. These shifts foster a layered ecosystem where the aircraft autopilot system market accommodates both tier-one primes and agile code specialists.

The Aircraft Autopilot System Market is Segmented by System (Attitude and Heading Reference Systems, Flight Director Systems,

Flight Control Computers, and More), Aircraft Type (Narrowbody, Widebody, Business Jets, and More), End-User (OEM Fitment and Retrofit) and Geography (North America, Europe, Asia-Pacific, and More). The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

North America led the aircraft autopilot system market with 43.35% revenue share in 2024, supported by robust defense budgets and a quick rebound in domestic air travel. The FAA's automation and cybersecurity regulation leadership makes the United States an early adopter of advanced autopilot features, reinforcing domestic procurement. Canada's regional-jet fleet modernization and Mexico's narrow-body expansion contribute incrementally. High utilization rates accelerate replacement cycles for flight control computers, locking in baseline demand. Honeywell, Collins Aerospace, and Garmin all maintain substantial production and engineering centers in the region, ensuring close alignment with customer requirements.

Asia-Pacific is the fastest-growing territory, advancing at an 8.12% CAGR through 2030. Middle-class air-travel adoption and defense modernization programs centrally drive China and India. Airbus forecasts the global fleet will double to 50,000 aircraft by 2044, with Asia-Pacific supplying most of that increment. Domestic OEMs such as COMAC integrate locally developed autopilot subsystems, while regional airlines launch large retrofit contracts to meet performance-based navigation mandates. Japan and South Korea invest in autonomous UAM ecosystems, exemplified by Thales's unmanned traffic management testbed in Thailand. Varied certification regimes create customization overhead and foster partnerships between global primes and local system houses, widening the aircraft autopilot system market footprint.

Europe remains a mature yet innovation-centric market. EASA's acceptance of Garmin Autoland on King Air platforms underscores regulatory openness to high-authority automation. Thales, Safran, and BAE Systems supply integrated autopilot and flight management packages across Airbus and Eurofighter programs. The European Defense Fund channels resources into AI-enhanced resilience features, such as the AIDA project that shields avionics buses from cyber intrusions. Middle East and Africa, while smaller in volume, register steady procurement from Gulf carriers and defense agencies upgrading transport and rotary fleets. Barrier factors include uneven economic conditions and regulatory capacity, yet the region still adds incremental value to the aircraft autopilot system market as wide-body utilization rebounds.

List of Companies Covered in this Report:

BAE Systems plc / Safran SA / Honeywell International Inc. / Collins Aerospace (RTX Corporation) / Garmin Ltd. / Thales Group / Moog Inc. / Avidyne Corporation / Dynon Avionics / Genesys Aerosystems (Moog, Inc.) / Lockheed Martin Corporation / L3Harris Technologies, Inc. / MicroPilot Inc. / UAV Navigation S.L. (Grupo Oesia SL) / Teledyne Technologies Incorporated /

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 The market estimate (ME) sheet in Excel format /
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