

North America Airborne Telemetry Market By Technology (Wired, Wireless), By Application (Commercial, Defense), By Component (Receiver, Transmitter, Antenna), By Country, Competition, Forecast & Opportunities, 2020-2030F

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Abstracts

North America Airborne Telemetry Market was valued at USD 880.24 Million in 2024 and is expected to reach USD 1124.75 Million by 2030 with a CAGR of 4.17% during the forecast period. North America airborne telemetry market is experiencing strong growth momentum driven by rising demand for secure and real-time communication across defense and aerospace applications, integration of advanced avionics systems in modern aircraft, and continuous investments in mission-critical technologies. Growing adoption of unmanned aerial vehicles for intelligence, surveillance, and reconnaissance operations is creating significant opportunities for telemetry solutions that can transmit large volumes of data with speed and accuracy. The emphasis on improved situational awareness, enhanced mission effectiveness, and reduced operational risks is fueling technological advancements in airborne telemetry systems.

Market Drivers

Rising Adoption of UAVs for Defense and Surveillance

The growing adoption of unmanned aerial vehicles for both defense and surveillance missions is a major driver of the airborne telemetry market. UAVs are increasingly being deployed for intelligence gathering, border monitoring, and tactical operations, which requires continuous and reliable data transmission systems. Telemetry plays a critical role in ensuring that UAVs can send back real-time information on positioning, speed, altitude, and environmental data to ground stations. This need for uninterrupted

communication between airborne platforms and operators has accelerated investments in advanced telemetry technologies capable of handling large data volumes at faster speeds. Modern UAVs are equipped with multiple sensors, cameras, and radar systems that generate massive amounts of mission-critical information, creating demand for more secure and efficient telemetry links. For instance, the US Navy is funding PteroDynamics' Transwing P5 autonomous VTOL UAV with \$4.6 million to support automated delivery of 22.5 kg payloads up to 400 nm. The UAV's folding wings and hybrid powertrain enable vertical-to-horizontal flight, reducing reliance on crewed rotorcraft, lowering costs, and allowing night and ship-to-shore operations.

Key Market Challenges

Spectrum Allocation Constraints

One of the major challenges facing airborne telemetry systems is the issue of spectrum allocation constraints. Telemetry relies on specific frequency bands for transmitting data between airborne platforms and ground stations, but these bands are increasingly crowded due to the growing use of wireless communication technologies. The competition for spectrum has become intense, leading to restrictions on available bandwidth for telemetry purposes. Limited spectrum availability can cause data bottlenecks, latency issues, or even signal interference, compromising the effectiveness of telemetry in mission-critical scenarios. This issue is especially concerning as modern aircraft and UAVs are generating greater volumes of data that require wider bandwidths for transmission. The regulatory environment surrounding spectrum allocation adds another layer of complexity, as different governing bodies impose restrictions and requirements that vary across applications.

Key Market Trends

Miniaturization of Telemetry Systems

Miniaturization of telemetry systems is a prominent trend reshaping the airborne telemetry market. As aerospace platforms, particularly UAVs and small aircraft, demand lighter payloads and higher efficiency, telemetry systems are being engineered to occupy less space without compromising performance. Miniaturization allows integration of telemetry into compact airborne systems where weight and size limitations are critical. Advances in microelectronics, system-on-chip designs, and lightweight materials are enabling manufacturers to create smaller yet more powerful telemetry devices capable of handling large volumes of data at high speeds. This trend is

particularly significant for unmanned platforms where extending operational range and conserving power are priorities. Compact telemetry units also allow more flexibility in system integration, making them suitable for both military and commercial aircraft.

Key Market Players

BAE Systems PLC

Lockheed Martin Corporation

L3Harris Technologies Inc.

Safran SA

Cobham PLC

Honeywell International Inc.

Thales Group

Kongsberg Gruppen AS

Orbit Communications Systems Ltd

AstroNova Inc.

Report Scope:

In this report, North America Airborne Telemetry Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

North America Airborne Telemetry Market, By Technology:

Wired

Wireless

North America Airborne Telemetry Market, By Application:

Commercial

Defense

North America Airborne Telemetry Market, By Component:

Receiver

Transmitter

Antenna

North America Airborne Telemetry Market, By Country:

United States

Canada

Mexico

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in North America Airborne Telemetry Market.

Available Customizations:

North America Airborne Telemetry Market report with the given market data, TechSci Research offers customizations according to the company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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