

Data Acquisition System Market by Offering (External Chassis, Plug-in Boards, Software), Speed (>100MS/S, 20MS/S-100MS/S, 1MS/S-20MS/S, 100KS/S-1MS/S), Use case (Flight & Space, NVH, Acoustics, Structural Health, Data Recording) - Global Forecast to 2030

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Abstracts

The global data acquisition system market is projected to grow from USD 2.80 billion in 2025 to USD 3.73 billion by 2030, at a CAGR of 5.9%. This growth is driven by the increased adoption in the aerospace and automotive industries, transitioning to intelligent automation. In aerospace & defense, DAQ systems are essential for testing performance and safety in extreme conditions. For automotive applications, they support electric powertrain verification, autonomous driving technology, and smart manufacturing processes. This integration of DAQ technology is becoming increasingly vital for enhancing personalization, efficiency, and reliability across these industries.

“Testing application to account for significant share of data acquisition system market”

The testing segment dominates the data acquisition system market due to its critical role in automotive, aerospace, electronics, energy, and manufacturing industries. As products and systems become more complex, the demand for accurate, real-time data has surged. DAQ systems are vital for measuring temperature, pressure, and electrical signals during testing phases. In automotive, technologies such as electric vehicles and autonomous driving increase the need for high-speed data acquisition to validate performance and safety.

“Wireless communication & infrastructure segment to register highest CAGR in data acquisition system market”

The wireless communication and infrastructure segment is projected to experience the highest CAGR in the data acquisition system market, driven by the rapid growth of 5G networks, IoT ecosystems, and smart city initiatives. These advancements require real-time monitoring and verification, which rely on advanced DAQ systems for high-frequency signals and network performance. The complexity of telecom infrastructure increases demand for high-speed, low-latency, scalable DAQ solutions.

“North America to dominate data acquisition system market”

North America is set to dominate the data acquisition system market due to its strong industrial sector, advanced R&D infrastructure, and high technology adoption in aerospace, automotive, defense, energy, and healthcare industries. The region boasts leading DAQ vendors and a mature infrastructure for automated testing and quality assurance, driven by strict regulatory standards. Key aerospace and automotive companies in the US rely heavily on advanced DAQ systems for simulation and safety validation.

In-depth interviews have been conducted with chief executive officers (CEOs), directors, and other executives from various key organizations operating in the data acquisition system marketplace.

By Company Type: Tier 1 – 45%, Tier 2 – 35%, and Tier 3 – 20%

By Designation: C-level Executives – 40%, Directors – 35%, and Others – 25%

By Region: North America – 45%, Europe – 25%, Asia Pacific – 20%, and RoW – 10%

The study includes an in-depth competitive analysis of these key players in the data acquisition system market, with their company profiles, recent developments, and key market strategies.

Research Coverage

This research report categorizes the data acquisition system market by offering, speed, application, vertical, and region (North America, Europe, Asia Pacific). The report scope covers detailed information regarding major factors influencing market growth, such as drivers, restraints, challenges, and opportunities. A thorough analysis of the key industry

players has provided insights into their business overview, solutions and services, key strategies, contracts, partnerships, and agreements. New product and service launches, acquisitions, and recent developments associated with the data acquisition system market. This report covers a competitive analysis of upcoming startups in the data acquisition system market ecosystem.

Reasons to Buy This Report

The report will help market leaders and new entrants with information on the closest approximations of the revenue numbers for the data acquisition system market and its subsegments. It will also help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Analysis of key drivers (Rising emphasis on data monitoring in end-use industries, increasing implementation of industry 5.0 across aerospace and automotive sectors,), restraints (Need for increasing computational power for real-time data analysis, High CAPEX cost and complexities associated with DAQ system), opportunities (Growing demand for automated DAQ systems, surging use of high-speed connectivity technologies including 5G), and challenges (Highly competitive market and cybersecurity threats) influencing the growth of the data acquisition system market.

Product Development/Innovation: Detailed insights on upcoming technologies, research and development activities, and product launches in the data acquisition system market

Market Development: Comprehensive information about lucrative markets—the report analyzes the data acquisition system market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the data acquisition system market

Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players in the data acquisition system

market, such as National Instruments (US), Keysight Technologies (US), Spectris (UK), AMTEK Inc. (UK), and Yokogawa Electric Corporation (Japan).

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