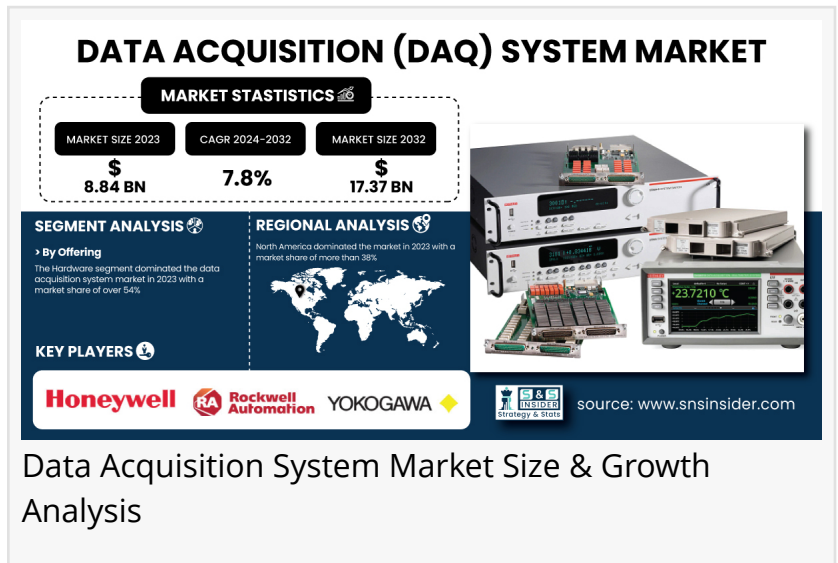


# Data Acquisition System Market to Reach USD 17.37 Billion by 2032 Driven by IoT and Automation | SNS INSIDER

*The Data Acquisition (DAQ) System Market is growing with demand for real-time data monitoring and analysis in industrial automation, research, and IoT.*

AUSTIN, TX, UNITED STATES, February 14, 2025 /EINPresswire.com/ -- Market Size & Industry Insights

As Per the SNS Insider, "The [Data Acquisition \(DAQ\) System Market](#) was valued at USD 8.84 billion in 2023 and is expected to grow to USD 17.37 billion by 2032, at a CAGR of 7.8% over the forecast period of 2024-2032."



Data Acquisition System Market Size & Growth Analysis

The increasing demand for real-time data monitoring and automation along with industrial IoT applications are stimulating growth in the Data Acquisition (DAQ) System market. Incorporating DAQ systems for accuracy measures and analysis within numerous industries such as automotive, aerospace, healthcare, and energy. This trend is being driven further by smart factories and Industry 4.0. A progressing modern DAQ system based on wireless DAQ technology, cloud computing, and AI analytics for improved efficiency and scalability.

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SWOT Analysis of Key Players as follows:

- National Instruments Corp
- Spectris PLC
- Honeywell International Inc
- Siemens Digital Industries Software
- Dataforth Corporation
- Teledyne Technologies Incorporated

- ADLINK Technology
- Yokogawa Electric Corporation
- Keysight Technologies
- Rockwell Automation Corporation

#### Key Market Segmentation:

**By Offering:** In 2023, hardware held the highest Data Acquisition (DAQ) System market share within the overall component segment, as DAQ devices, sensors, and interface modules play an essential role in collecting and processing the data. The high-speed, high-accuracy measurements that are crucial to industries like automotive, aerospace, and healthcare make DAQ hardware essential. Demand for powerful DAQ hardware solutions was additionally fueled by the growing popularity of edge computing and industrial automation. Moreover, increasing investments in R&D, rapid deployment of IoT-based monitoring systems, and sensor technology advancements have propelled the market growth overall during the forecast period. In real-time applications, robust and scalable data acquisition hardware was essential to make it a top leader.

**By Speed:** In 2023, the High-Speed (>100 KS/s) segment accounted for the highest market share of the Data Acquisition (DAQ) System, as they play an important role in applications that demand real-time data capture that will be based on low latency from forms of short sample periods that are received within a short time, thus allowing the measurement of high data fast changes. High-speed DAQ systems make real-time monitoring, signal processing, and dynamic testing viable for industries such as aerospace, automotive, and electronics. Demand for AI also increased due to the advent of self-driving cars, automation in manufacturing, and precision healthcare diagnostics.

**By Industry Vertical:** In 2023, the aerospace and defense sector accounted for the largest share of the Data Acquisition (DAQ) System market, owing to a greater need for accurate data acquisition in mission-critical applications. DAQ systems are used in various applications such as aircraft testing, missile guidance, radar systems, and monitoring of defense equipment in real-time. This is further supported by the fact that the regulatory requirements in the sector are stringent and fast data processing will also result in high adoption. Moreover, rising defense budgets, the development of military aircraft, and ever-increasing investments in space exploration propelled the market growth.

**By Application:** In 2023, the Data Acquisition (DAQ) System market share was dominated by the manufacturing sector owing to various factors such as the increasing adoption of automation in factories, smart factories, and Industry 4.0 technologies. Real-time monitoring, quality control, and predictive maintenance facilitated through DAQ systems enhance operational efficiency with less downtime. Also, factors such as the increasing need for high-speed, precise data acquisition in manufacturing lines, robotics, and machine health tracking, are contributing to the growth of the market. The process optimization is further improved by IoT-enabled DAQ

systems and cloud-based analytics.

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#### KEY MARKET SEGMENTS:

##### BY OFFERING

Hardware

Software

##### BY SPEED

High-speed (>100 KS/S)

Low-speed (<100 KS/S)

##### BY INDUSTRY VERTICAL

Aerospace & Defense

Wireless Communications & Infrastructure

Automotive & Transportation

Power & Energy

Environmental Monitoring

Food & beverage

Healthcare

Others

##### BY APPLICATION

Manufacturing

R&D

Field

Others

#### North America Leads DAQ Market in 2023 While Asia Pacific Poised for Rapid Growth

In 2023, North America held the largest share of the Data Acquisition (DAQ) System market because of the large number of Key Market Players situated in North America, highly advanced Industrial Automation, and huge investments in Aerospace, Defense, and Automotive. Early adoption of advanced technologies like AI-driven analytics, IoT-based DAQ systems, and cloud computing driven innovative demand growth from the region. Moreover, the market growth is further driven by strict regulatory requirements about safety and quality control across various industries such as healthcare, energy, and manufacturing.

Asia Pacific is projected to grow at the highest CAGR during the forecasted (2024-2032) timeframe, owing to rapid industrialization, expansion of automobile and electronics industries, and government initiatives promoting smart manufacturing. China, India, and Japan- these

countries have a big focus on automation, digital transformation, and infrastructure development. The growing adoption of Industry 4.0, rising demand for high-speed systems in semiconductor manufacturing, and the growing aerospace and defense sector are projected to propel the growth of the market over the forecast period.

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