SCOTTS INTERNATIONAL

Data Acquisition - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Data Acquisition Market size is estimated at USD 2.58 billion in 2025, and is expected to reach USD 3.64 billion by 2030, at a CAGR of 7.1% during the forecast period (2025-2030).

Data acquisition systems play an essential role in real-time decision-making in the industrial sector. As companies develop toward a data-centric approach in production and operations to maintain a competitive edge while promoting the users to access the data at any time, irrespective of the location, data acquisition systems have evolved from mere processing systems to the key to achieving the full benefits of automation.

Key Highlights
- One of the primary drivers of the data acquisition market is the promising growth of Ethernet. Industrial Ethernet has grown faster than traditional field buses during the last few years and has overtaken field buses.
- This demand has been augmented by the growing need for faster internet speeds, seamless integration of factory installations, the adoption of IoT, and industrial controls. Such trends have been instrumental in driving the demand for data acquisition systems.
- Moreover, the adoption of factory automation and smart manufacturing across the world is a major growth driver of the data acquisition market. These include tracking multiple system parameters and monitoring many data sources while exchanging data in real-time, including PLCs, databases, maintenance applications, and existing data acquisition systems, to gain greater visibility of the machine and floor operations.
- Although North America dominated the market for data acquisition systems, good government reforms, strong industrial automation adoption, and smart manufacturing initializes are expected to boost the market in the European region to attain a more significant market share over the forecast period. This development is anticipated to be backed by the economies of

Germany and the United Kingdom, which are adopting the next generation of industrial solutions.

- Additionally, advances in electronic technologies led to inexpensive sensing and monitoring capabilities. An Open-Source Hardware project called Arduino has been used, along with low-cost sensors, to develop several inexpensive, automated sensing and data logging systems for research purposes. This is suggestive of potential yet increased open-source DAQ software investment for developing the advanced system in the future.

- The pandemic forced a transition for several industries and enterprises and primed the market for a switch into fully monitored operations and the increased prescience obtained through well-designed systems. Most critical systems began implementing data acquisition systems to improve their efficacies.

Data Acquisition Market Trends

Aerospace and Defense Accounts for Significant Share in the Market

- The development of efficient space exploration devices elevates the demand for data acquisition systems that enable safer and better-managed journeys. Startups in the sector, such as SpaceX and BlueOrigin, have been consistent with work in the establishment of efficient, interconnected systems. In August 2021, SpaceX acquired the satellite data startup Swarm Technologies to consolidate their 120 SpaceBee satellites in orbit, furthering their data acquisition initiatives and expanding their star-link infrastructure.

- The DDS was employed to present data from the P&V system, 32 IP cameras, eight microphones, and the DAS to observe the test in progress. GUIs are used complementarily to view real-time progress or retrieve past test data. The tandem operations of the three systems allow engineers to replicate real-world scenarios and encourage more detailed simulation of capabilities needed to complete early-stage structural tests.

- Not all collaborations in aerospace have been dedicated to space exploration. Increasing sensitivity of sensors and data analysis systems have projected the growth of Space Observation initiatives. In July 2021, Spire Global announced the continuation of its participation in NASA's Commercial Small-sat Data Acquisition (CSDA) program with a USD 6 million contract extension. The contract includes Task Order 6 (TO6), a subscription data solution that provides for radio occultation (RO) data, soil moisture, precise orbit determination (POD) data, grazing angle GNSS-RO, total electron content (TEC) data, ocean surface wind speed GNSS-Reflectometry data, and magnetometer data acquisition. The data is made available to all federal agencies, NASA-funded researchers, and all US government-funded researchers for scientific purposes.

- NASA stated the positives that the Spire data has enabled, primarily its GEOS Atmospheric Data Assimilation System, which utilizes space-based data to analyze the earth's atmosphere and integrate it into its earth observation systems. Furthermore, NASA has employed Spire data in research on water and sea ice levels in the polar regions, the Planetary Boundary Layer's height (PBL) height, and the day-to-day variability of thermospheric density at flight level.

North America Presently Holds the Largest Market Share

- The North American market for data acquisition has been growing significantly, with players such as National Instruments, Keysight, Tektronix, and Siemens, accounting for over 35% of the market. However, increasing demand for intelligent manufacturing through Industrial Internet of Things (IIoT) architectures has been made achievable by selecting the appropriate hardware and software. The region is highly depictive of adopting faster means of production with errorless outcomes.

- On average, the manufacturers spent nearly 80% of their time handling the architecture and data acquisition. With the remaining 20% left for data analysis, adopting IIoT can help lower the time spent on data acquisition. This requires a mainstream adoption of IIoT in the region. To build an IIoT ecosystem, the vendors have taken several measures. For instance, National

Instruments with Cisco, Intel, and others created an IIoT Lab. Additionally, IoT is significant throughout supply chains.
- Moreover, the United States has been one of the leading automotive markets in the world and is home to over 13 major automobile manufacturers. The automotive manufacturing industry has been one of the largest revenue generators for the country in the manufacturing sector.
- Industrial automation is the primary driving factor expected to drive the demand for DAQ systems. The increasing adoption of controlling processes without human interference relies heavily on data to provide instructions. Hence, any minor misdirection may lead to drastic losses to the industry.
- Efficient data acquisition has become a core component of any vehicle to provide accurate data regarding its working to ensure compliance with any regulation and maintain a sense of oversight over any operations. Since the Volkswagen scandal regarding its emissions, user needs have emerged from a reliability standpoint, and compliance with other systems and system functions, such as DCSs and operation and monitoring functions, has become a priority.

Data Acquisition Industry Overview

The Data Acquisition Market is fragmented. The major companies operating in the market try to eliminate the competition and improve their capabilities utilizing either acquisition or strategic mergers. Some key players in the market include ABB Ltd, Advantech Co. Ltd, Agilent Technologies, Campbell Scientific Inc., Data Translation Inc., Schneider Electric SE, Honeywell International, Siemens AG, Rockwell Automation Inc., MathWorks Corporation, General Electric Ltd, Omron Corporation, Yokogawa Electric Co., and Emerson Electric Co.

Some key developments in the market include:

- April 2021- The global customer experience platform Piano entered into a partnership with ID5, InfoSum, LiveRamp, and Usercentrics to extend its First-Party Data Acquisition solution, that integrates its data management, identity, and customer journey orchestration capabilities and provides one system and one view that collects, unifies and activates user data across the entire digital ecosystem, preventing data leakage and poor ad performance while improving customer experience.
- April 2021 - An automated external data platform, Explorium, announced the launch of its data acquisition product, Signal Studio, for advanced analytics and machine learning that allows the data and business analyst teams to quickly find and integrate the most relevant external data signals into their analytics pipeline.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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