

China Factory Automation And Industrial Controls - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The China Factory Automation And Industrial Controls Market size is estimated at USD 147.90 billion in 2024, and is expected to reach USD 255.60 billion by 2029, growing at a CAGR of 11.22% during the forecast period (2024-2029).

Key Highlights

The evolution of technological advancements and innovations across various manufacturing units has encouraged the adoption of automation technologies.

Digitization and Industry 4.0 initiatives in China have significantly stimulated the growth of automation among industries by necessitating more innovative and automated solutions, such as robotics and control systems, to improve production processes. China's economy witnessed impressive growth due to its manufacturing capabilities and the government's investments in factories, infrastructure, and machinery.

China has led the industrial robot market, driving its way to factory automation in the region. The country is also one of the leading manufacturing countries globally in Asia-Pacific. The increase in the shipment of industrial robots in the country and the adoption of various industrial control system software across the country facilitates factory automation at scale.

Automation in China is expected to be augmented by the uptake of intelligent manufacturing. According to the Ministry of Industry and Information Technology, the country has initiated over 100 pilot projects for intellectual manufacturing in the past few years. Also, in June 2022, Shenzhen announced the Action Plan for Cultivating and

Developing Intelligent Robot Industry Clusters. In June 2023, the Beijing Municipal government announced the Beijing Robot Industry Innovation and Development Action Plan (2023-2025).

Government incentives and targets have advanced the potential of the Chinese market to dive into factory automation. Made in China 2025 plan encourages domestic players to decrease their dependency on foreign players. The rapidly soaring labor costs and declining manufacturing labor force supply in China are also helping in the penetration of industrial robots and factory automation.

The government's strong support in the acquisition program has helped the country move towards Industry 4.0. For instance, Siasun, a China-based industrial robot maker, is affiliated with the Chinese Academy of Sciences, which is further linked to the government.

With the rising cost of production in China and the strengthening of the Yuan against the Dollar, investors have been looking at alternate manufacturing destinations. However, manufacturers need to focus on quality production and environment-friendly manufacturing regulations. With the growing technology, a fully automated facility takes years to adjust and evolve. Meanwhile, unfavorable or delayed initiatives on active automation adaptation have limited growth on a regional basis.

China Factory Automation And Industrial Controls Market Trends

The Distributed Control System Segment is Expected to Hold a Significant Market Share

DCS are process-oriented platforms that depend on interconnected sensors, controllers, terminals, and actuators to act as a centralized master controller for a facility's production operations. Thus, a DCS focuses on controlling and monitoring processes and allowing facility operators to see all facility operations from one place.

One of the significant benefits of the DCS system is that the digital communication between distributed controllers, workstations, and other computing elements follows the peer-to-peer access principle. To achieve greater precision and control in process industries, like the petrochemical, nuclear, and oil and gas industries, there is an increasing demand for controllers that offer specified process tolerance around an identified set point.

Moreover, many requirements have driven the adoption of DCS, as these systems provide lower operational complexity, project risk, and functionalities like flexibility for agile manufacturing in highly demanding applications. The ability of DCS to integrate PLCs, turbomachinery controls, safety systems, third-party controls, and various other plant process controls for heat exchangers, feedwater heaters, and water quality further drives the adoption of DCS in the energy sector.

The growth in electric power generation in China is developing demand for distributed control systems (DCS). According to the national power industry statistics for the 2023 report published by CEC, the total installed electricity generation capacity in China in 2023 was 2919.6 gigawatts.

In January 2022, China announced the use of dual control systems to control energy consumption. In the future, energy consumption and intensity will be transformed into a "dual control system" for carbon emissions and power. These initiatives will accelerate the adoption of the DCS system in the major manufacturing facilities between 2024 and 2029.

The Oil and Gas Sector is Expected to Register a Significant Growth

The geographically dispersed oil and gas platforms require proper communication systems. Growth in solutions like PLC, SCADA, DCS, and safety automation is attributed to the enormous development of industries in China. It is also expected to create a massive demand for automation products that include DCS systems.

In March 2023, Aramco signed definitive agreements to acquire a 10% shareholding in Shenzhen-listed Rongsheng Petrochemical Co. Ltd for CNY 24.6 billion (USD 3.6 billion); this would significantly expand its downstream presence in China. Under the strategic agreement, as part of an ongoing long-term sales arrangement with Rongsheng's subsidiary Zhejiang Petroleum and Chemical Co. Ltd, Aramco would supply this company with 480,000 barrels of Arabian crude oil daily.

Moreover, the oil and gas industry is subject to several government regulations for safety, plant reliability, and efficiency. ICS finds applications in remote terminal units (RTU) and pumping and compression stations to ensure safety.

The industry increasingly adopts ICS solutions to maintain safety and environmental

integrity without compromising production efficiency. Automation helps integrate information and control, power, and safety solutions to meet the requirements of affordable energy and stringent government regulations.

Moreover, owing to the high demand for automation in the oil and gas industry, Seeq expanded its support for the oil and gas industry by introducing new connectors to CygNet enterprise Supervisory Control and Data Acquisition (SCADA) Wellsite Information Transfer Markup Language (WITSML) data storage systems. This enables advanced analytics and faster data-based decision-making in the current challenging industry environment.

Over the past few years, oil and gas companies have invested heavily in cybersecurity technologies, such as incident response solutions and software capable of collecting logs in ICS environments to enhance visibility and segmenting networks, prevent lateral movement, and eliminate imminent threats.

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China Factory Automation And Industrial Controls Industry Overview

The Chinese factory automation and industrial controls market is highly fragmented, with the presence of several prominent companies. Companies continuously invest in strategic partnerships and product developments to gain market share. Some of the recent developments in the market are:

March 2024 - Rockwell Automation announced that it is collaborating with NVIDIA to accelerate the next-generation industrial architecture. To make it easier for automation customers to digitalize industrial processes, Rockwell plans to evolve the industry by building a future factory.

February 2024 - ABB announced that it plans to leverage this integration of AI with robotics in sectors such as automotive, consumer goods, education, and emerging areas like healthcare, retail, and new energy. This strategic move aims to create additional value for customers by introducing new levels of autonomy in robotic

applications across China.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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