

Indonesia Automation and Control System - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Indonesia Automation and Control System Market size is estimated at USD 109.90 million in 2024, and is expected to reach USD 336.41 million by 2029, growing at a CAGR of 8.59% during the forecast period (2024-2029).

With Indonesia's steady amalgamation with the world's economy, Indonesia's Automation and Control System will be essential in bringing costs down.

Key Highlights

- Automation and Control System refers to systems that oversee and control a wide range of processes involved in manufacturing and distributing goods and services. Many universal and essential services depend on Automation and Control Systems, from assembly lines to power stations. For example, many utility or telecommunication infrastructures that maintain a modern nation's social, industrial, and economic well-being rely on Automation and Control Systems.
- Indonesia is a prominent industrial manufacturer that highly adopts automation in its industries. Manufacturing contributes a considerable amount to a country's GDP. For instance, according to Statistics Indonesia, in 2022, Indonesia's manufacturing sector contributed over 18 percent of the country's GDP, the most significant contributor to the nation's economy. The robust manufacturing activities in Indonesia and Malaysia will likely augment the demand for the studied market.
- Growing government funding to encourage automated systems in numerous industrial verticals, booming demand for automation from different manufacturing sectors, increasing innovations in industrial robotics, swelling technological advancements in manufacturing, and the need for mass production and related supply chains to cater to the rising population are the crucial factors driving the growth of automation and process control systems market in Indonesia.
- Indonesia's mineral resources are vast and unexplored, and it is the world's largest exporter of Tin, palm oil, and thermal coal. It is also one of the major exporters of Nickel, Copper, Bauxite, Rubber, Manganese, Zinc, and Lead, among others. Mining accounts

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for about a tenth of Indonesia's GDP and has played a vital role in the country's economic development over the years. The rising demand for metals and minerals, with the growing demand for semiconductors and electronics, fuels the adoption of automated systems in the mining sector.

-The energy sector is experiencing an increase in demand for automation and control systems due to the emergence of smart city programs. Indonesia has taken the lead in this regard by launching the 100 Smart Cities Movement, a comprehensive digitalization program aimed at addressing urbanization challenges. This initiative is part of the government's plan to tackle the issue of urbanization, with projections indicating that 83 percent of the Indonesian population will reside in urban areas by 2045.

-Indonesia is also encouraging the use of biomass to improve the greening of existing Steam Power Plants through the innovative Biomass Co-Firing program. The program aims to co-fire biomass in 52 locations by 2025 and has already co-fired biomass in 37 areas, using 306 thousand tons to reach the 1.08 million ton target by 2023. Such programs and new projects and investments to develop the power and utility sector of the country are expected to create new market opportunities for the implementation of automation and control systems in the country.

-However, the initial costs associated with automation and control systems are high. The complexity of customization and integration adds to the overall costs. Moreover, installing automation equipment may require modifications to the existing infrastructure of the factory. This can include changes to the layout, electrical systems, and safety features to accommodate new equipment, which incur additional costs. Such factors might hinder the market growth.

-A notable impact of COVID-19 was observed on the studied market as the widespread lockdown across various parts disrupted the supply chain of multiple industries. Although the food and beverage, pharmaceutical, and semiconductor industries were considered essential, supply chain disruptions, fluctuating demand conditions, and uncertain market conditions significantly impacted the operational capabilities of various food processing, pharmaceutical, and semiconductor companies, especially during the initial phase.

Indonesia Automation and Control System Market Trends

Food and Beverages to Drive the Indonesia Automation and Control System Market

- The food and beverage sector holds a prominent position in Indonesia's economy, serving as a vital contributor to the nation's GDP. The industry benefits from abundant natural resources and a growing domestic demand, bolstering its resilience. Notably, during the second quarter of 2022, the food and beverage sector accounted for a substantial 38.38 percent of the non-oil and gas industry's GDP, solidifying its status as the leading sub-sector in terms of GDP contribution within Indonesia.

- Based on data from Statistics Indonesia (BPS), the food and beverage (F&B) industry increased by 4.90 percent on an annual basis in 2022 to IDR 813.062 billion. This condition is inseparable from the increased production of the food and beverage commodity itself. According to CRIF forecasts for 2023, the food and beverage industry is expected to experience an increase of around 5 percent compared to the previous year. Factors influencing this growth are the high sensitivity of the food and beverage industry to changes in the economic environment. CRIF also considers that this industry still has good prospects, especially in the context of national economic recovery after the COVID-19 pandemic.

- The Making Indonesia 4.0 strategy, which aims to position Indonesia as a global Top 10 economy by 2030, has identified critical technologies such as the Internet of Things (IoT), automation, robotics, artificial intelligence, and Sensor technology as its core components. Among the priority sectors in this strategy, the food and beverage industry stands out. Consequently, the country's food and beverage sector is expected to experience a growing demand for digital transformation, leading to an increase in automation and control systems. In line with the national Making Industry 4.0 industrial strategy, the Indonesian government is urging the local food and beverage industry to embrace digital advancements and transition towards using local raw ingredients for manufacturing.

- Food safety is a crucial element in the food and beverage industry, with COVID-19 further intensifying its significance. Manufacturers have been compelled to scrutinize and enhance their food safety measures. The deployment of robots can aid in

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improving food safety by eliminating the need for human intervention, thereby significantly reducing the risk of cross-contamination in food manufacturing facilities. Additionally, the demand for packaged food is surging globally, including in Indonesia, where sophisticated machines in food packaging facilities have replaced manual methods.

- Moreover, As per the data from the Indonesia Bureau of Statistics, the country comprises 52 percent of Gen Z and millennial consumers, and in order to deal with them, companies are evolving and working towards catching up in terms of digital evolutions, thus positively impacting the demand for automation and industrial control equipment and technologies. Food & Beverage (F&B) manufacturing has embraced IIoT, AI, PLC, Robotics, and more such tools to move up production and quality. Developments in real-time data processing and predictive analytics further help introduce new ways of utilizing data to generate insights for effective decision-making.

- The adoption of Robotic technology in the food sector is emerging in the region with various innovative solutions that are expected to drive the market. For instance, in September 2022, The inaugural KEENON Robotics Exhibition, held in the Indonesian region, showcased a range of cutting-edge robotic products and services in the fields of food, hospitality, and domestic assistance. The event, which took place in Nusa Dua, Bali, featured an impressive display of restaurant robots, hotel robots, hospitality robots, and disinfection robots. These advanced machines are capable of operating autonomously and concurrently, providing invaluable support to the restaurant and hotel industry in areas such as reception, food delivery, and disinfection. This significant advancement and progress in the region is anticipated to greatly encourage the integration of robots within the sector.

DCS Holds a Dominant Position in Indonesia Automation and Control System Market

- A Distributed Control System (DCS) is an integrated control architecture that includes a supervisory level of control overseeing multiple integrated sub-systems responsible for managing the intricacies of a localized process. DCS is primarily utilized in industrial processes such as oil and gas refineries, oil production, etc. These systems are specifically designed with redundancy and diagnostic capabilities to enhance control reliability and performance. They offer increased flexibility in controlling distributed discrete field devices and their operating stations.

- The scalability of a Distributed Control System (DCS) is a significant advantage. It can be initially implemented as a comprehensive, integrated system or as a standalone system that can be expanded as required. Anticipated positive influences on market growth include the growing demand in the power and energy sectors and the development of industrial infrastructure in the country.

- DCS systems offer significant benefits, including peer-to-peer access between distributed controllers, workstations, and other computing elements. In process industries such as petrochemical, nuclear, and oil and gas, there is a growing demand for controllers that provide precise control and process tolerance around a set point. The Indonesian oil and gas sector's increasing investments are creating new opportunities for DCS applications. DCS is widely used in the oil and gas industry and provides enhanced control over the production process.

- Indonesia is a prominent natural gas producer globally, possessing the third-largest gas reserves in the Asia Pacific region, following Australia and China. The nation has proposed the allocation of ten oil and gas working areas, including a block in the South China Sea, to enhance energy production and exploration. In 2022, 13 oil and gas fields were auctioned. Additionally, SKK Migas has projected that the Gendalo-Gehem project will reach a peak gas output of 844 million cfd by 2022, with production commencing in 2027, subject to a revised development plan that incorporates Eni's existing gas production facilities nearby. These significant advancements in the industry will promote the adoption of DCS devices in the sector.

- The market is also expected to witness a significant demand owing to the rising adoption of DCS, investments, and digitization in the region's water industry. Indonesia's local water companies, known as PDAMs, have embarked on a process of modernizing their operations and services by incorporating digital technology. They have successfully integrated applications for customer meter reading, digital billing, complaint management, employee databases, and payroll, resulting in faster and more efficient administrative processes. In early 2023, Perumdam Tirta Sanjiwani and Bima Sakti Alterra agreed to implement a comprehensive SWGM solution, which was piloted in the Blahbatuh technical zone. This development can be seen as a positive step towards the

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widespread adoption of DCS, as it enhances the efficiency, reliability, and safety of water treatment operations while also reducing operational costs and environmental impacts.

- The downstream-processing industry in Southeast Asia has experienced notable growth and expansion. Indonesia remains a prominent participant in the global mining industry, producing substantial amounts of coal, copper, gold, tin, bauxite, and nickel. The mining sector is a crucial contributor to Indonesia's GDP, accounting for approximately 12 percent in 2022, with coal mining alone representing 7 percent. The industry is also adopting digitization to sustain its expansion, which is anticipated to have a favorable effect on the demand for DCS.

Indonesia Automation and Control System Market Competitive Landscape

The Indonesian automation and control system market is moderately competitive and consists of several major players. In terms of market share, few major players currently dominate the market. These major players with a prominent market share are focusing on expanding their customer base across numerous countries.

In May 2022, ETAP and Schneider Electric announced the integration of EcoStruxure Power Operation with ETAP Operator Training Simulator (eOTS) and ETAP Power System Monitoring & Simulation (PSMS), enabling model-driven power system training and predictive analysis for operators and engineers. This specific integration ensures that all EcoStruxure Power Operation systems are connected to the ETAP Electrically Digital Twin continuously on a genuine time basis.

In April 2022, Rockwell Automation strengthened its partner network with its latest partnership with CAD-IT, a Singapore-based Industry 4.0 technologies provider. CAD-IT has a vast network in Southeast Asia, with a presence in multiple countries, including Indonesia. Through the partnership, CAD-IT will offer Rockwell Automation's smart manufacturing and automation solutions, among other solutions.

Additional Benefits:

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

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