

Smart Motors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Smart Motors Market size is estimated at USD 2.13 billion in 2025, and is expected to reach USD 2.84 billion by 2030, at a CAGR of 5.9% during the forecast period (2025-2030).

The term 'smart factory' refers to various fully integrated automation solutions adopted for manufacturing facilities. Such integration helps streamline the material flow during all the processes involved in manufacturing, allowing the movement of materials across the factory floor effectively.

Key Highlights

- Several manufacturing companies are qualified to achieve zero waste production and shorter time-to-market. Effortless monitoring, waste reduction, and production speed are significant advantages of automated manufacturing processes. This technology offers users improved standardization quality and dependable products within the time and at a much lower cost.
- Advancements in electronics and data analytics recently led to the introduction of smart devices with built-in intelligence. Their integration with communication technologies and the Internet enables the Internet of Things (IoT). According to Cisco, 8.7 billion handheld or personal mobile-ready devices and 4.4 billion M2M connections will be available by 2023.
- Mobile M2M connections enabled a broad range of IoT applications and represented 34% of global mobile devices and connections in 2023. Tremendous shifts in manufacturing due to Industry 4.0 and the approval of IoT require enterprises to adopt agile, more brilliant motors to advance production with technologies that complement and augment human labor with automation and reduce industrial accidents caused by process failure.
- For instance, one of the critical advantages of smart electric motors is their ability to provide valuable insights into motor performance and efficiency. Operators can monitor its condition by collecting and analyzing data from sensors integrated into the motor in real-time.

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- This allows for proactive maintenance, as potential issues can be recognized and addressed before they lead to costly breakdowns. Additionally, the data collected can be used to optimize motor performance, leading to energy savings and improved overall efficiency.
- Many organizations still lack information about measures that reduce energy usage, installation of energy-efficient solutions, information on numerous energy-efficiency opportunities, and the technologies for enhancing the performance of the utilized energy because some of the greatest barriers to enterprise adoption of IoT are the complexity and access to talent that understands this complexity holistically. This challenges the market's growth, resulting in a low implementation rate of smart motors.

Smart Motors Market Trends

Industrial Application Segment is Expected to Hold Significant Market Share

- Smart motors are employed to regulate the motor's speed based on specific needs and purposes. In the industrial sector, these smart motors are capable of handling intricate tasks within machinery, executing precise and diverse functions through the integration of the Industrial Internet of Things (IIoT). Industrial smart motors find their application in various fields, such as industrial automation, material handling, and robotics. The utilization of these advanced motors, commonly referred to as "smart" motors, is steadily growing across numerous industrial sectors.
- The need for machine control has become highly important in today's era, where technology has gained prominence due to the numerous applications it enables. Present-day industries are continuously investing in the effective implementation of the latest innovations that have revolutionized business operations. The incorporation of smart motor technology in various industrial applications will greatly contribute to enhancing the performance of the technology utilized in the modern era.
- In addition, the industrial sector is witnessing a growing demand for smart motors due to the importance of advanced control features in robotics and automation solutions. This transition toward automation is being observed across various sectors as industries strive to enhance production efficiency, increase capacity, and reduce production time. In addition, the scarcity of labor, rising labor costs, and the need for energy-efficient solutions are further motivating industries to adopt these advanced technologies.
- Smart motors find significant applications in the industrial sector, particularly in smart manufacturing, motor-driven processing equipment, material handling, mixers, extruders, pumps, compressors, etc. The ability of smart motors to reduce energy consumption has driven their adoption in the studied sector. Industrial factories use diverse kinds of motors, and the motor conditions are confirmed daily to ensure stable and safe operations at respective sites. Since monitoring the conditions of motors requires technical proficiency and experience, there is a need for a system that could replace the manual process with highly skilled experts for monitoring motors and analyzing conditions.
- Several companies are making substantial investments to improve their innovations and promote the advancement of smart motor technology, given the increasing benefits these motors offer in industrial applications. An example of this is CG Smart Motors, which recently introduced Smart Motors in September 2023. This next-generation technology allows industries to monitor the health of their motors and implement preventive measures to prevent downtime or breakdowns. By leveraging IIoT-enabled communication, this technology facilitates smart communication for businesses, ultimately enhancing efficiency and productivity in industrial plants.
- According to IFR, 2022 witnessed a 5% increase in the number of industrial robot installations compared to the previous year, with a remarkable total of over 553,000 units deployed globally. Most of these new robots, accounting for 73%, were installed in Asia, while Europe and the Americas contributed 15% and 10%, respectively. Thus, the market is expected to maintain its growth momentum, with a projected expansion rate of 7% in 2023. This growth is anticipated to lead to a significant milestone of 600,000 units being reached. These positive developments are driving investments in the robotics industry and creating promising opportunities within the market.

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Asia-Pacific is Expected to Hold Significant Market Share

- Asia-Pacific is one of the most significant markets for the market studied. The region offers massive growth potential to the studied market vendors, owing to the growing adoption of automation across the various end-user industries in the region. The energy concern in the region is also increasing the adoption of low-voltage electrical equipment and motivating many firms to develop energy-efficient and compact electrical equipment and devices, further driving the growth of smart motors.
- Initiatives like the 'Make in India' program place India on the world map as a manufacturing hub and give global recognition to the Indian economy. The Made in India campaign has bolstered multiple new launches in industrial robots in the country. India's industrial automation sector has been revolutionized by the combination of digital and physical aspects of manufacturing to deliver optimum performance. The focus on achieving zero waste production and a shorter time to acquire the market has augmented the growth.
- The massive shifts in manufacturing due to Industry 4.0 and the acceptance of IoT to advance production, with technologies to achieve greater production capacity and output, have propelled the demand for smart motors in the market. Also, the additional drive benefits, such as minimized maintenance requirements and improved process control, boost adoption.
- China's focus on renewable energy and sustainability has greatly contributed to the growth of the smart motors market. These smart motors are now being widely employed in renewable energy generation and distribution systems to enhance efficiency, control, and integration with smart grids. The government's initiatives, such as "Make in China 2025," are expected to further promote the adoption of smart motors across various industries, leading to a surge in market demand. As a result, the industrial sector in China is anticipated to witness substantial growth.
- The Government of India has forecasted that India will attract a total investment of USD 58 billion to explore and extract oil and gas resources by 2023. Moreover, prominent international energy corporations like Chevron Corp., ExxonMobil, and TotalEnergies have shown keenness to invest in India.
- Malaysia holds the distinction of being the second-largest oil producer in Southeast Asia and the fifth-largest exporter of liquefied natural gas (LNG) across the world. According to Petronas, Malaysia is projected to allocate a significant sum of USD 12.5 billion toward upstream expenditure in 2023, representing a notable 35% increase from the previous year. This anticipated investment level is the highest seen in the past five years.
- Petronas announced that its wholly-owned subsidiary, Petronas Carigali, had successfully discovered six oil and gas reserves in June 2023. These developments are expected to drive the adoption of various automation technologies, leading to an increased demand for smart motors in the region's oil and gas sector.

Smart Motors Industry Overview

The smart motors market is highly fragmented, with the presence of major players like Safran Electrical & Power, Siemens AG, Nanotec Electronic GmbH & Co. KG, Turntide Technologies Inc., and Schneider Electric SE. Players in the market are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

- July 2023 - Nidec Corporation announced the acquisition of TAR, LLC d/b/a Houma Armature Works, a privately owned US company ("Houma"), from its founding family through the Company's subsidiary, Nidec Motor Corporation. Through this acquisition, Nidec Motor Corporation can enhance its service offering, expanding its share within its own US installed base. Houma will be able to provide services to NMC's customers.

- July 2023 - Moog Animatics has unveiled its latest offering, the Class 6 D-style SmartMotor range. This upgraded line not only boasts a smaller footprint but also promises a reduced total cost and a streamlined design. Building upon its predecessor's highly

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programmable nature, the new SmartMotor now integrates a motor, multiturn absolute encoder, amplifier, and controller. It also offers a diverse set of communication options, such as USB, dual-port Industrial Ethernet, and conventional RS-232/RS-485 and CAN connections.

Additional Benefits:

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

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