

Industrial MLCC - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The Industrial MLCC Market size is estimated at 1.11 billion USD in 2024, and is expected to reach 2.86 billion USD by 2029, growing at a CAGR of 20.86% during the forecast period (2024-2029).

There is a dynamic interplay between advanced electronic components and industrial applications in the market

The industrial MLCC market, categorized by case size, showcases a dynamic landscape characterized by the interplay between advanced electronic components and industrial applications. Within this context, the specific case sizes 0 201, 0 402, 0 603, 1 210, 1 005, and others exemplify the pivotal role of MLCCs in ensuring optimal performance and reliability across various sectors.

The 0 201 case size is critical in AC servo motors and is essential for precision-driven applications like robotics, semiconductor equipment, and aircraft systems. These MLCCs enhance efficiency, reliability, and noise reduction, which is vital for seamless operation in diverse industrial settings.

The 0 402 case size category takes center stage in the pursuit of energy-efficient solutions, aligning with global initiatives to reduce emissions and achieve sustainable industrial practices. MLCCs in this category facilitate efficient power distribution and signal integrity, supporting the adoption of energy-efficient technologies. Cobots and automation drive the demand for 1 210 MLCCs, ensuring stability in confined spaces. These MLCCs align with OMRON's TM20 and Doosan Robotics' E-SERIES cobots.



The demand for 0 603 MLCCs is growing with industrial automation. Global industrial production growth strengthens the market, aligning with compact, reliable MLCC requirements. The 1 005 MLCCs cater to precision machinery and align with automation trends, mirroring cobot installations, especially in China. MLCCs in case sizes like 0 805, 1 812, 2 220, 1 218, and 1 813 power semiconductors and electronics meet EV demands and energy efficiency initiatives, thus driving the growth of the MLCC and semiconductor market.

Technological advancements and economic dynamics are shaping the landscape, propelling the global industrial MLCC market

The global industrial MLCC market stands at a critical juncture, propelled by the confluence of rapid technological advancements and the ever-evolving economic landscape. In North America, a relentless pursuit of automation and manufacturing excellence drives the adoption of MLCCs. Robust industrial robotics markets, particularly in the United States and Canada, are catalysts for the steady rise in demand. This segment not only explores the increasing integration of MLCCs in industrial robots but also uncovers the expanding role of these components in service robots, aligning with the region's healthcare and aging population challenges.

Asia-Pacific is emerging as a technological powerhouse, with Japan and China leading the charge. A vibrant landscape of automation, robotics, AI, and IoT solutions propels the region forward. This analysis dives deep into how MLCCs enable stability in Japan's intricate robotics while facilitating the rise of 5G-powered industrial IoT (IIoT) devices in China. The region's technological pioneers are poised to shape the future of MLCC demand.

In Europe, the dawn of Industry 4.0 revolutionized manufacturing and robotics. The intricate interplay between industrial robots and MLCCs is explored, emphasizing their pivotal role in power management and robust performance. As Europe experiences a surge in robotic installations, the demand for MLCCs is expected to enhance operational efficiency and gain prominence, setting the stage for transformative growth.

The Rest of the World, encompassing Latin America and Middle East & Africa, unveils a tapestry of diverse economic shifts and technological aspirations.



Global Industrial MLCC Market Trends

Continuous advancements to meet the evolving requirements of automation applications are increasing the demand for control PLC sales

MLCCs are essential components in PLCs, alongside the processor, power supply, and input/output (I/O) section. An important role of MLCCs in PLCs is to ensure a stable power supply and filter out noise for sensitive components like microprocessors and integrated circuits.

By providing reliable decoupling or bypassing capabilities, MLCCs enhance the performance of PLCs, reducing the potential for malfunctions and data corruption, thus ensuring seamless operation in industrial environments. As a result, the demand for MLCCs in the PLC market continues to grow, driven by the need for robust and reliable power management solutions in industrial automation.

The demand for industrial programmable logic controllers (PLCs) is fueled by their continuous advancements to meet the evolving requirements of automation applications. PLCs now offer enhanced programming capabilities, enabling greater flexibility, scalability, and ease of use. They are equipped with larger memory capacities and compact sizes, allowing for the integration of high-speed (gigabit) Ethernet connectivity and built-in wireless features. This feature facilitates efficient monitoring and control of distributed server/multi-user applications. The availability of compact MLCCs with high capacitance values enables PLC manufacturers to design smaller yet highly functional systems, meeting the demand for space-efficient and high-performance PLC solutions.

The emergence of smart factories is propelling the demand for MLCCs

The industrial robots' production volume increased from 0.41 million units in 2021 to 0.43 million units in 2022. Industrial robots play a crucial role in manufacturing industrial automation, with many core operations in industries being managed by robots. In industrial robots, MLCCs are primarily used for filtering and decoupling purposes. They help stabilize and regulate the power supply, ensuring smooth and reliable operation of the robot's electronic components. MLCC requirements in industrial robots can vary depending on factors such as the size and complexity of the robot, the power requirements, and the level of precision and reliability needed.



The industrial robotics market is segmented into articulated robots, linear robots, cylindrical robots, parallel robots, and SCARA robots, which can be used in various enduser industries such as automotive, chemical and manufacturing, construction, electrical and electronics, food and beverage, machinery and metal, and pharmaceutical. The overall automotive industry witnessed growth in terms of production volume, from 133.20 million units in 2021 to 139.87 million units in 2022. The rising demand for automobiles necessitates increased production, resulting in the increased use of industrial robots in the automotive manufacturing process and the involvement of Al and digitalization.

During the COVID-19 pandemic, there was an increase in demand for robots since they could be used to curb the spread of infectious diseases. With the introduction of robots, healthcare professionals were able to perform surgery with maximum precision.

Industrial MLCC Industry Overview

The Industrial MLCC Market is moderately consolidated, with the top five companies occupying 57.14%. The major players in this market are Murata Manufacturing Co., Ltd, Samsung Electro-Mechanics, Taiyo Yuden Co., Ltd, Walsin Technology Corporation and Yageo Corporation (sorted alphabetically).

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