Americas Microcontroller (MCU) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 100 pages | Mordor Intelligence

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Report description:

The Americas microcontroller (MCU) market was valued at USD 2.28 billion in the current year and is expected to reach USD 5.57 billion by the end of the forecast period by registering a CAGR of 16.7% during the forecast period.

Key Highlights
-The microcontroller market is growing in the region owing to several significant consumer electronics markets, which have increased demand for Internet of Things-enabled products such as smart watches, health & medical devices, sensors, etc. This leads to higher regional requirements for microcontrollers.
-A significant driver of market expansion in the region is the increased number of automated machines. Additionally, the development of portable gadgets like smartphones, tablets, and personal computers has considerably fueled industry expansion. The luxury automobile segment's growth has also contributed to the market's development.
-The demand for hybrid and electric cars will rise in the region in the projected period. A factor that would propel the 32-bit MCU market would be the rising adoption brought on by the product's drop in unit cost. The 32-bit MCU market is expected to develop throughout the forecast period due to the fast-growing automotive, communications, consumer electronics, and industrial industries.
-A significant increase in the market for microcontroller units (MCUs) utilized in Internet of Things (IoT) applications has positively impacted the growth of the MCU industry. IoT microcontrollers are produced based on demand, determined by the need for IoT applications.
-Microcontrollers have highly intricate designs, requiring much power to manufacture such circuits. Designing systems that operate more quickly and use less electricity can be challenging. The peak power, voltage, current ratings, and applications must all be considered while building a microcontroller.
-The geopolitical tensions between countries are expected to hamper the global supply chain in the coming years. The major

manufacturers of microcontrollers based in the US are expected to experience a fall in demand for MCUs due to the export and import regulations, the United States and China dispute over Taiwan, and the US-China trade war. The United States banned the export of electronic components and other equipment to Russia in response to Russia's attack on Ukraine.
-The building of the TSMC (Taiwan Semiconductor Manufacturing Company) fab in the US caused controversy in Taiwan. The global community is regionalizing due to the US-China economic and technological rivalry, the COVID-19 pandemic, and the war between Russia and Ukraine.

Americas Microcontroller (MCU) Market Trends

Automotive Application Segment is Expected to Hold a Considerable Share

- In the automobile industry, a microcontroller is used to manage electrical control unit activities, manage fail-safe and fault-tolerant automotive systems, and report problems that occur in the vehicle (such as the accelerator, anti-lock brake interface, and broken lights).
- The growing vehicle electrification and automation, stringent government regulations, consumer demand for increased safety, reliability, comfort, and efficiency, and increasing need for security across all automotive applications are some of the major factors driving the adoption of automotive microcontrollers in the American region.
- Growth in automotive microcontroller sales mainly depends on vehicle sales and production trends, along with the increase in semiconductor deployment per vehicle, driven by the proliferation of electronic features throughout the vehicle. Due to the high degree of regulatory scrutiny and safety requirements, the automotive industry is characterized by stringent qualification processes, zero-defect quality processes, functionally safe design architecture, high reliability, extensive design-in timeframes, and extended product lifecycle, which result in significant growth of microcontrollers in the sector.
- General Motors Co. announced to its investors in New York City that it expects its swiftly growing electric vehicle portfolio to achieve profitability in North America by 2025. This outlook is based on the company's plans to ramp up production in the region to over one million EVs annually, expand software sales opportunities, generate substantial greenhouse gas reductions, and take advantage of the newly available clean energy tax credits
- According to the Argonne National Laboratory, in the United States, the estimated sales of plug-in electric vehicles (PEVs) reached nearly 918,500 units in 2022. By looking at the sales of electric vehicles and the rise in production of electric vehicles (EV), it is anticipated that the market growth for the MCU will increase during the forecast period.

United States is Expected to Hold Significant Market Share

- With the growing demand for 5G network equipment, servers, and autonomous and electric vehicles (EV) applications in the United States, the adoption of microcontrollers is anticipated to witness a remarkable surge over the forecast period.
- According to Cox Automotive, Tesla sales accounted for approximately 64.5% of battery EVs in the United States, increasing to about 809,700 by 2022. Second-ranked Ford accounted for just 7.6 percent of battery electric vehicle sales in the United States.
- With the upcoming 5G technology, the Internet consumption rate and the industry's requirement for adequate data storage facilities are anticipated to increase. According to GSMA, 5G adoption in the United States is anticipated to reach 68% by 2025. Such growth is further expected to influence the development of the microcontroller (MCU) market.
- The prominent market leaders in the country are focusing on expanding their product line related to MCU, which will allow the companies to strengthen their positions in the studied market. For instance, in March 2023, Texas Instruments (TI) announced that it is expanding its broad analog and embedded processing semiconductor portfolio by introducing a scalable Arm Cortex-M0+ microcontroller (MCU) portfolio that features a wide range of computing, pinout, memory, and integrated analog options.

- In April 2022, Microchip Technology introduced five new product families and more than 60 individual devices to help embedded designers solve their most common problems. These new devices combine application-specific integrated circuit (ASIC)-like capabilities with a simple development experience, allowing them to be configured as smart peripheral chips while extending traditional MCU capabilities. These intelligent peripherals enhance applications, such as software-controlled op-amps, multi-voltage I/O (MVIO), and analog-to-digital converter with computation (ADCC).

Americas Microcontroller (MCU) Industry Overview

The Americas microcontroller (MCU) market is characterized by its high fragmentation and intense competition due to the presence of numerous global players. Some of the key players in this market include Microchip Technologies Inc., Texas Instruments Incorporated, Intel Corporation, ON Semiconductor, and Analog Devices Inc. To maintain their competitiveness, these companies are dedicated to continuous innovation in their product offerings.

In November 2022, Texas Instruments Inc. (TI) introduced software development kits for matter-enabled Wi-Fi and thread simpleLink wireless microcontrollers (MCUs). This software is the outcome of TI's active involvement in the Connection Standards Alliance and its contributions to advancements in 2.4-GHz connectivity. Engineers can leverage these kits to create ultra-low-power, secure, battery-operated smart home and industrial automation IoT applications that seamlessly integrate with devices from various proprietary ecosystems. This software is compatible with wireless MCUs such as the CC3235SF and CC2652R7.

In May 2022, Microchip Technologies Inc. unveiled the industry's first microcontroller (MCU) that combines a secure subsystem with Arm TrustZone technology in a single package. The PIC32CM LS60, featuring Microchip's Trust Platform secure subsystem, streamlines the development of end products by enabling the use of a single microcontroller instead of multiple semiconductor chips. This innovation simplifies the design and production processes for a wide range of applications.

Additional Benefits:

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

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