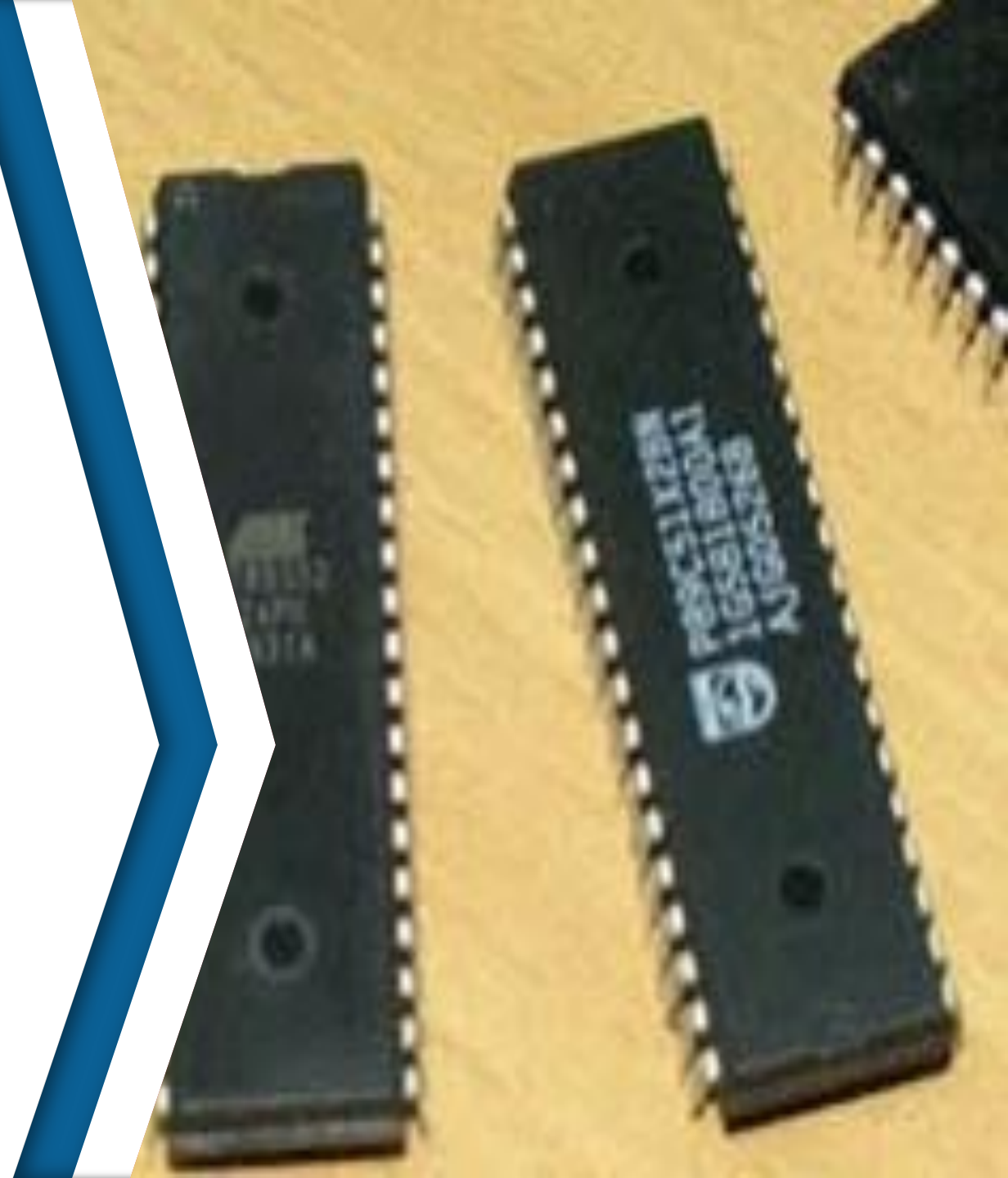
Global Automotive Microcontroller Unit (MCU) Market: Analysis By Product Type, By Vehicle Type, By Application, By Region, Size and Trends with Impact of COVID-19 and Forecast up to 2028

March 2023

Daedal Research



Global Automotive Microcontroller Unit (MCU) Market: Coverage

- Executive Summary and Scope
- Introduction/Market Overview
- Global Market Analysis
- Regional Market Analysis
- Impact of COVID-19
- Dynamics
- Competitive Landscape
- Company Profiling

Global Automotive Microcontroller Unit (MCU) Market: Coverage

Scope of the Report

Attributes	Details
Title	Global Automotive Microcontroller Unit (MCU) Market: Analysis By Product Type (32-bit MCUs, 16-bit MCUs, 8-bit MCUs), By Vehicle Type (Passenger Vehicles, Commercial Vehicles and Electric Vehicles), By Application (Chassis & Powertrain, Body Electronics, Safety & Security Systems, and Infotainment & Telematics), By Region Size and Trends with Impact of COVID-19 and Forecast up to 2028
Coverage	Global/ Regional
Market Influencing Variables	Growth Drivers, Challenges, Market Trends
Forecast Period of Market	2023-2028
Competition in the Market	Highly Fragmented
Key Players	Renesas Electronics Corporation, NXP Semiconductor N.V., Infineon Technologies AG, Texas Instruments, Microchip Technology Inc., STMicroelectronics N.V, ROHM Semiconductor, Toshiba Corporation, ON Semiconductor Corporation, NVIDIA Corporation, Analog Devices, Inc. (Maxim Integrated), Taiwan Semiconductor Manufacturing Company Limited and Silicon Laboratories, Inc.

Global Automotive Microcontroller Unit (MCU) Market: Coverage

Executive Summary

An automotive microcontroller enables automatic control sensing, enhances safety features in vehicles and increases speed of execution in vehicles. Automobile manufacturers have used MCUS over a long time for the purpose of engine control, power steering, seating and antilock brakes. Since microcontrollers primarily take on control and communication tasks, there are many applications in automobiles that are possible with microcontrollers and can be implemented simply and cost-effectively. In 2022, the global automotive microcontroller unit (MCU) market was valued at US$6.42 billion. The market value is anticipated to reach US$9.35 billion by 2028, growing at a CAGR of 6.45% during the forecast period of 2023-2028.

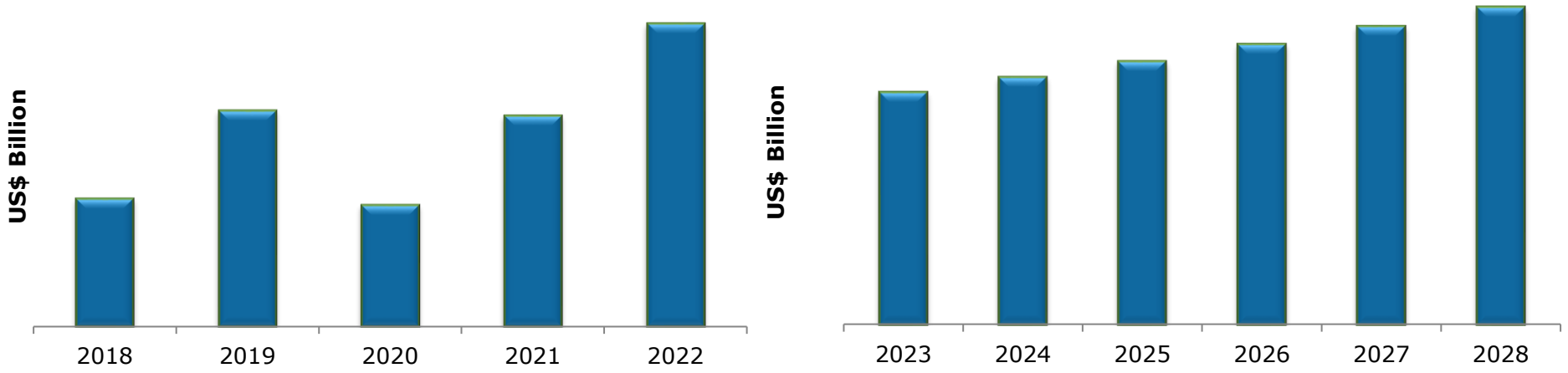
Global automotive microcontroller unit (MCU) market can be classified on the basis of product type (32-bit MCUs, 16-bit MCUs, 8-bit MCUs), vehicle type (Passenger Vehicles, Commercial Vehicles and Electric Vehicles) and application (Chassis & Powertrain, Body Electronics, Safety & Security Systems, and Infotainment & Telematics). Among the product type, 32-bit MCUs segment held the major share in the market in 2022. Asia Pacific is the largest share holder of the global automotive microcontroller unit market.

The COVID-19 pandemic has wreaked havoc on global automotive microcontroller unit market. The pandemic caused a sharp decline in demand for automobiles, which in turn led to a decrease in global automotive manufacturing rate, usage of microcontrollers. Further, supply disruption, created major gaps in the manufacturing of automotive microcontrollers, thus hampering the market.

Global automotive microcontroller unit market is expected to show a significant increase during the forecasted period, i.e. from 2023 to 2028. The growth can be attributed to surging demand for electric vehicles, increasing disposable income, growing demand for advanced driver assistance systems (ADAS), rising installation of enhanced safety features and rise in demand for in-vehicle infotainment system (IVI). However, some challenges are also impeding the growth of the market such as security risks and high costs and functional and operational failures in extreme climatic conditions.

Automotive Microcontroller Unit (MCU) Market: Global Analysis

Global Automotive Microcontroller Unit (MCU) Market by Value

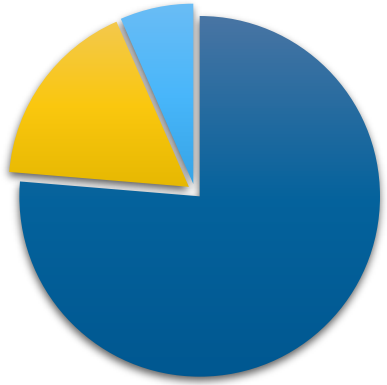


CAGR	
2023-2028	xx%

Global automotive microcontroller unit (MCU) market, value is expected to reach from US$.... billion in 2023 to US$.... billion in 2028. The market is expected to grow at a CAGR of ….% over the years 2023-2028.

Automotive Microcontroller Unit (MCU) Market: Global Analysis

Global Automotive Microcontroller Unit (MCU) Market by Product Type; 2022



Product Type	Share
32-bit MCUs	xx%
16-bit MCUs	xx%
8-bit MCUs	xx%

Global Automotive Microcontroller Unit (MCU) Market by Vehicle Type; 2022

Vehicle Type	Share
Passenger Vehicles	xx%
Commercial Vehicles	xx%
Electric Vehicles	xx%

Automotive Microcontroller Unit (MCU) Market: Global Analysis

Global Automotive Microcontroller Unit (MCU) Market by Application; 2022

Application	Share
Chassis & Powertrain	xx%
Body Electronics	xx%
Safety & Security Systems	xx%
Infotainment & Telematics	xx%

Global Automotive Microcontroller Unit (MCU) Market by Region; 2022

- Asia Pacific, xx%
- North America, xx%
- Europe, xx%
- Rest of the World (ROW), xx%

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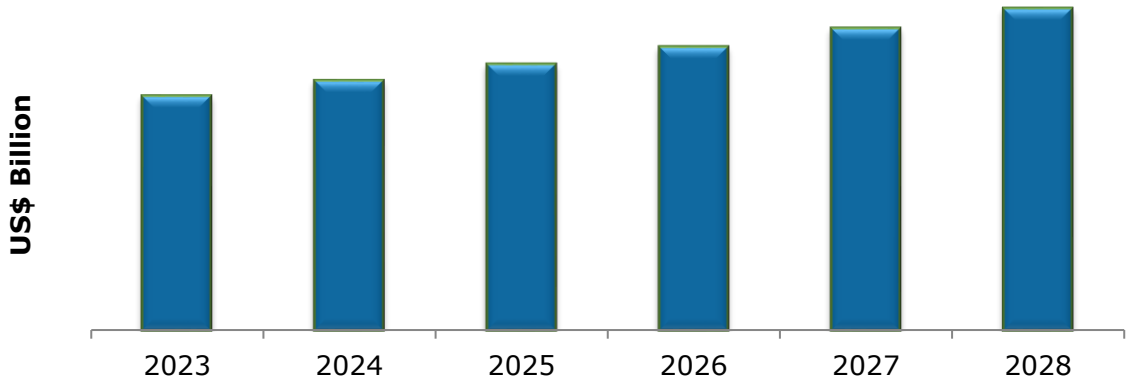
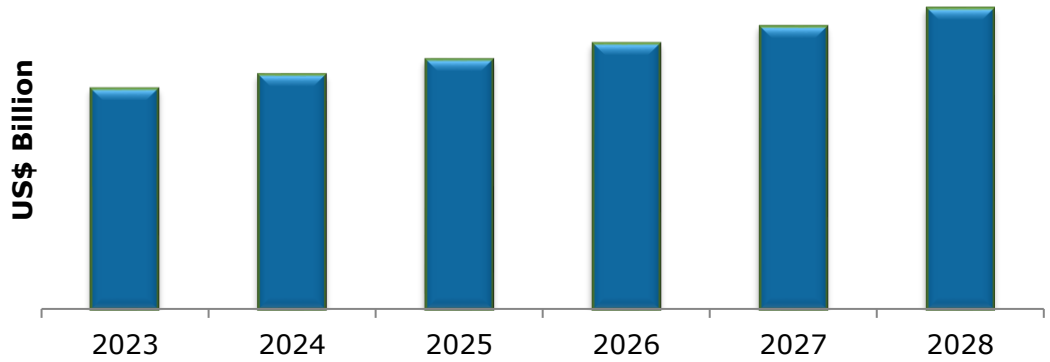
Global Automotive Microcontroller Unit (MCU) Market: Product Type Analysis

Global 32-Bit Microcontrollers Market by Value



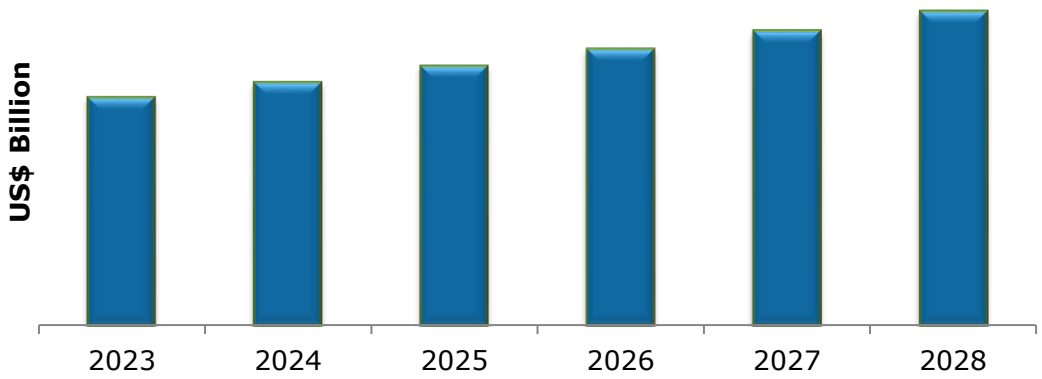
Global 16-Bit Microcontrollers Market by Value



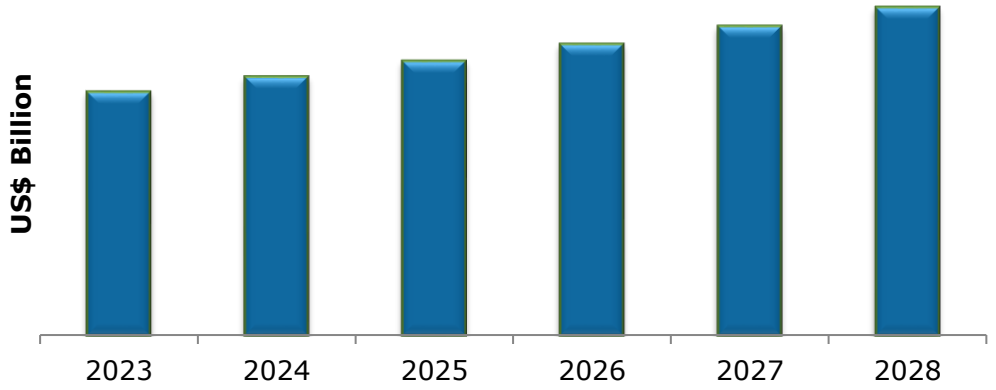
Product Type	CAGR (2023-2028)
32-bit MCUs	xx%
16-bit MCUs	xx%
8-bit MCUs	xx%

Global Automotive Microcontroller Unit (MCU) Market: Vehicle Type Analysis

Global Passenger Vehicles Automotive MCU Market by Value



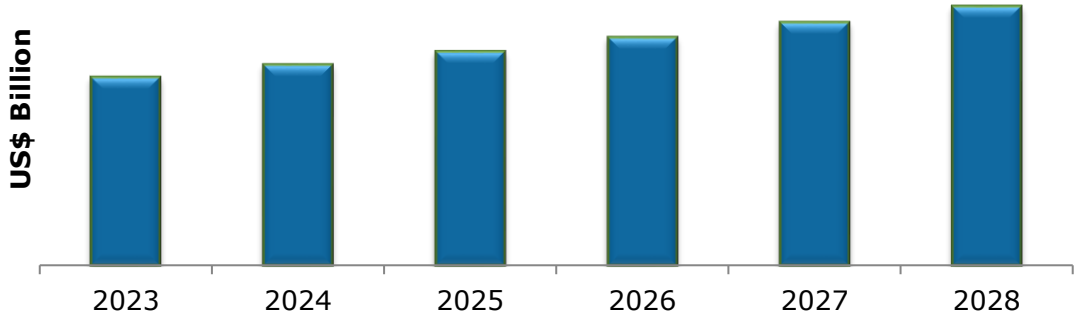
Global Commercial Vehicles Automotive MCU Market by Value



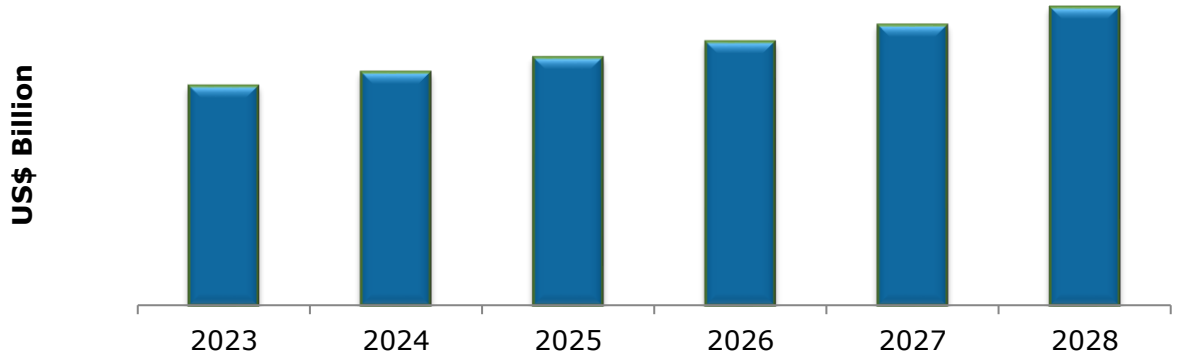
Vehicle Type	CAGR (2023-2028)
Passenger Vehicles	xx%
Commercial Vehicles	xx%
Electric Vehicles	xx%

Global Automotive Microcontroller Unit (MCU) Market: Application Analysis

Global Powertrain & Chassis Automotive MCU Market by Value



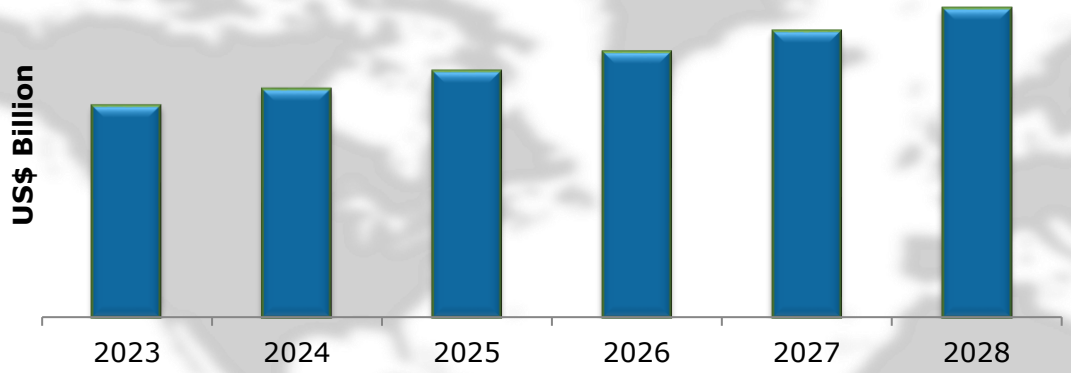
Global Body Electronics Automotive MCU Market by Value



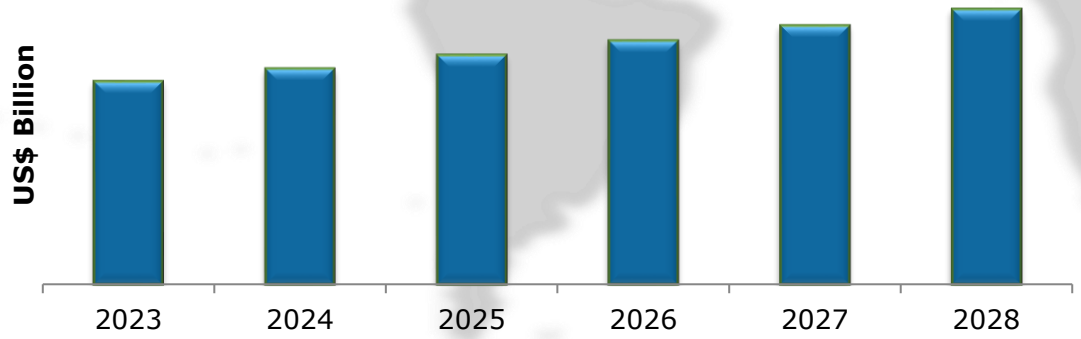
Application	CAGR (2023-2028)
Chassis & Powertrain	xx%
Body Electronics	xx%
Safety & Security Systems	xx%
Infotainment & Telematics	xx%

Automotive Microcontroller Unit (MCU) Market: Regional Analysis

Asia Pacific Automotive Microcontroller Unit (MCU) Market by Value



North America Automotive Microcontroller Unit (MCU) Market by Value



Region	CAGR (2023-2028)
Asia Pacific	xx%
North America	xx%
Europe	xx%
Rest of the World	xx%

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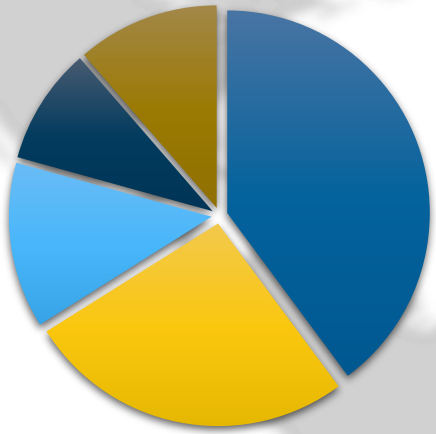
Automotive Microcontroller Unit (MCU) Market: Asia Pacific Analysis

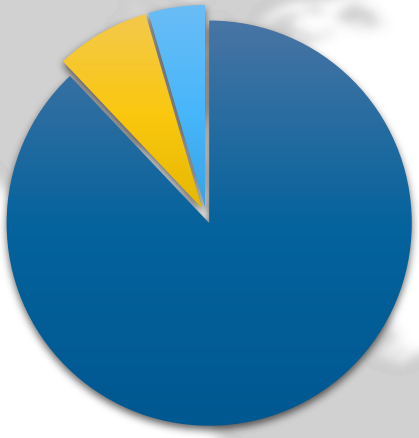
Asia Pacific Automotive Microcontroller Unit (MCU) Market by Region; 2022



Region	Share	CAGR (2023-2028)
China	xx%	xx%
India	xx%	xx%
Japan	xx%	xx%
South Korea	xx%	xx%
Rest of Asia Pacific	xx%	xx%

Automotive Microcontroller Unit (MCU) Market: North America Analysis

North America Automotive Microcontroller Unit (MCU) Market by Region; 2022



Region	Share	CAGR (2023-2028)
The US	xx%	xx%
Canada	xx%	xx%
Mexico	xx%	xx%

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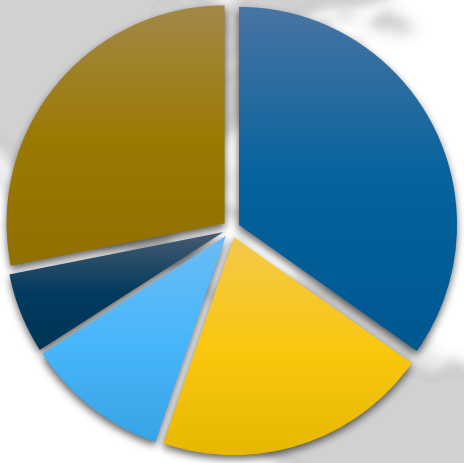
Automotive Microcontroller Unit (MCU) Market: Europe Analysis

Europe Automotive Microcontroller Unit (MCU) Market by Region; 2022



Region	Share	CAGR (2023-2028)
Germany	xx%	xx%
The UK	xx%	xx%
France	xx%	xx%
Italy	xx%	xx%
Rest of Europe	xx%	xx%

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Global Automotive Microcontroller Unit (MCU) Market: Dynamics

Growth Driver

- Increasing Disposable Income
- Surging Demand for Electric Vehicles

Challenges

- Security Risks and High Costs
- Functional & Operational Failures in Extreme Climatic Conditions

Market Trends

- Upsurge in Demand for Autonomous Vehicles
- Increasing Semiconductor Content in Vehicles

Global Automotive Microcontroller Unit (MCU) Market: Competitive Landscape

Players Profiled

- Renesas Electronics Corporation
- NXP Semiconductor N.V.
- Infineon Technologies AG
- Texas Instruments
- Microchip Technology Inc.
- STMicroelectronics N.V.
- ROHM Semiconductor
- Toshiba Corporation
- ON Semiconductor Corporation
- NVIDIA Corporation
- Analog Devices, Inc. (Maxim Integrated)
- Taiwan Semiconductor Manufacturing Company Limited
- Silicon Laboratories, Inc.