

Microprocessor in Embedded Applications: Global Markets

Market Research Report | 2022-10-14 | 192 pages | BCC Research

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Report description:

Description

Report Scope:

The market scope is defined through consideration of MPU architecture such as ARM-based MPUs and x86-based MPUs and also focuses on various end-user industries for MPU, including networking devices, medical and healthcare, aerospace and defense, military, consumer electronics, computing and storage, industrial, automotive and transportation, and others. Market estimates are classified on the basis of architecture, technology, products, end-user industries, and geographic regions.

Report Includes:

- 70 data tables and 56 additional tables
- A brief general outlook of the global market for microprocessor in embedded applications
- Analyses of the global and regional market trends, with historic market revenue for 2021, estimates for 2022 and 2023, and projections of compound annual growth rates (CAGRs) through 2027
- Estimation of the actual market size and revenue forecast for global MPUs market in USD million terms, and corresponding market share analysis based on technology, architecture, product category, end-user industry, and region
- Highlights of the emerging technology trends, opportunities and gaps estimating current and future demand for embedded microprocessors, and impact of COVID-19 on the progress of this market
- Identification of the companies best positioned to meet this demand owing to their proprietary technologies, new product launches, M&A deals, and other strategic alliances
- Insight into recent industry structure, competitive aspects of each product segment, major growth strategies, and company value share analysis based on their segmental revenues
- Updated information on key mergers and acquisition deals, agreements, partnerships, collaborations and product launches

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within the embedded microprocessor marketplace

- Profile descriptions of the leading global manufacturers of embedded microprocessors, including Apple, Huawei Technologies, Marvell Technology, Qualcomm Technologies and Samsung Electronics

Executive Summary

Summary:

A microprocessor or microprocessor unit (MPU) is a programmable device that accepts binary data from an input device, processes the data according to the instructions stored in the memory and provides results as output. In other words, the microprocessor executes the program stored in the memory and transfers data to and from the outside world through I/O ports. Any microprocessor-based system essentially comprises three parts, namely the microprocessor, the memory and peripheral I/O devices. The microprocessor is generally referred to as the heart of the system as it performs all the operations and also controls the rest of the system.

The global market for microprocessors was estimated at REDACTED in 2021. It is projected the market will grow at a CAGR of REDACTED to reach REDACTED by the end of 2027. The growth in autonomous driving systems and electrification in the automotive market, growing demand for connected devices and implementation of 5G communication infrastructure will be the major drivers for the MPU market. Growth in high-performance computing (HPC) and growing demand for smartphones and wearables will create huge opportunities for vendors in the market.

In this report, the global market for microprocessors is segmented by architecture, technology, products, end-user industries, and geography. By architecture, the MPU market is categorized into ARM-based MPUs and x86-based MPUs. X86-based MPU architecture is currently dominating the market and was valued at REDACTED in 2021. It is estimated that surface-mount technology (SMT) will grow at a CAGR of REDACTED and is forecast to reach REDACTED by the end of 2027.

Based on technology, the global market for MPUs is segmented into RISC (reduced instruction set computer), DSP (digital signal processor), ASIC (application-specific integrated circuit), CISC (Complex Instruction Set Computer), and superscalar. Based on product in which MPUs are used, the market is segmented into smartphones, personal computers, laptops, and others. Based on end-user applications, the MPU market is segmented into networking devices; medical and healthcare; aerospace and defense; military; consumer electronics and home appliances; computing and storage; industrial; automotive and transportation; and others.

By geography, the global market for MPUs is segmented into North America, Europe, Asia-Pacific, and the Rest of the World (RoW). The Asia-Pacific region currently is the most dominant MPU market by region. In 2021, total revenue from the Asia-Pacific MPU market reached REDACTED, which is around REDACTED of the global market. The presence of leading global MPU manufacturing bases, robust technology infrastructure, favorable political and economic environment, and surge in demand for smartphones and wearables and high adoption of advanced technologies, such as AI, IoT and cloud are some of the key factors driving the Asia-Pacific market. Asia-Pacific is also currently the fastest growing market for MPUs globally.

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ADVANCED MICRO DEVICES INC.

ANALOG DEVICES INC.

APPLE INC.

BROADCOM INC.

HUAWEI TECHNOLOGIES CO. LTD.

IBM CORP.

INFINEON TECHNOLOGIES AG

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STMICROELECTRONICS N.V.
TAIWAN SEMICONDUCTOR MANUFACTURING CO. (TSMC) LTD.
TEXAS INSTRUMENTS INC.
UNISOC TECHNOLOGIES CO. LTD.

Chapter 13 Appendix: List of Abbreviations

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