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Microprocessor and GPU Market Research Report – Global Forecast till 2027

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Description:

Microprocessor and GPU Market Overview

The microprocessor and GPU market involves the sales of microprocessors and GPUs by entities such as organizations, sole traders, and partnerships engaged in manufacturing microprocessors and GPUs. A microprocessor is a small electronic device containing arithmetic, logic, and control circuitry to perform central processing unit functions in any computer. GPU is denoted as the graphics processing unit, and it is used in applications such as graphics and video interpretation. The microprocessor and GPU market globally was valued at USD 75.46 billion in 2018 and is anticipated to reach USD 87.73 billion by the expected period, registering a CAGR of 2.63%.

The increase in implementation of cloud-based platforms and server environments all over the globe acts as one of the main factors driving the growth of the microprocessor and GPU market. The rise in demand for consumer electronics increased the adoption of IoT-enabled devices and equipment. High demand for greater performance and energy-efficient processors and GPUs quicken the market growth. The increase in the rearrangement of information from local settings to cloud-based database settings operating database processor development and the rise in demand for unmanned aerial vehicles or drones for entertainment further affect the market. Moreover, urbanization and digitization increase the saturation of smartphones, and the extension of end-use industries positively impacts the microprocessor and GPU market.

Moreover, the rise in demand for artificial intelligence and deep learning-based applications, such as the adoption of smart factories and Industry 4.0 and supercomputers, will extend profitable opportunities to the market players in the estimated 2020 to 2027. GPUs process data more effectively and precisely than CPUs, which process the data sequentially. These benefits make the GPU an ideal component where there is a requirement of processing data in real-time.

Segmentation:

By architecture, the microprocessor market has been segmented into x86, ARM, MIPS, Power, and SPARC. The x86 segment is expected to contribute a major share to the microprocessor and GPU market while the ARM segment is expected to register a high growth rate. X86 is largely used in the consumer electronics segment, thereby contributing a major share to the market.

By end-user, the microprocessor market has been segmented into consumer electronics, automotive, healthcare, aerospace & defense, and others. The consumer electronics segment is expected to contribute the largest share of the microprocessor market whereas the automotive segment is expected to register the highest CAGR during the forecast period. Emerging applications in connected cars such as ADAS and infotainment are leading to the growth of this market.

By type, the GPU market has been segmented into discrete graphics and integrated graphics. The discrete graphics segment is expected to dominate the GPU market during the forecast period while the integrated graphics segment is expected to register the highest CAGR during the forecast period.

Regional Analysis:

The global market for Microprocessor and GPU is estimated to grow at a significant rate during the forecast period from 2019 to 2024. The geographic analysis of Microprocessor and GPU market has been conducted for North America, Europe, Asia-Pacific, and the rest of the world (including the Middle East, Africa, and Latin America). Among the aforementioned regions, Asia-Pacific is expected to hold the largest share of the Microprocessor and GPU market during the forecast period. The presence of semiconductor companies such as Samsung (South Korea), Mediatek (Taiwan), Renesas (Japan), Toshiba (Japan), Spreadtrum (China), and Rockchip (China) is one of the major reasons for high share for Microprocessor and GPUs from this region. Furthermore, the high demand for consumer electronics and rapid adoption of IoT in healthcare and manufacturing in countries including China and Japan has led to the market's growth. Europe is expected to grow at a significant CAGR during the forecast period. This is due to the rapid development of autonomous vehicles in this region. Also, industrial automation is expected to play a very important role in the growth of the market.

Global Microprocessor and GPU Market, USD Billion:

The global microprocessor and GPU market was valued at USD 75.46 billion in 2018 and is expected to reach USD 87.73 billion by the end of the forecast period with a CAGR of 2.63%.

Key Players:

The key players in the Microprocessor and GPU market are identified across all the major regions based on their country of origin, presence across different regions, recent key developments, product diversification, and industry expertise. Some of them are Advanced Micro Devices, Inc. (US), IBM Corporation (US), Intel Corporation (US), Texas Instruments Incorporated (US), Nvidia Corporation (US), NXP Semiconductors (Netherlands), Samsung Electronics (South Korea), Qualcomm Technologies Incorporated (US), Renesas Electronics Corporation (Japan), and Broadcom Limited (US). These players contribute a major share in the growth of Microprocessor and GPU market.

Apart from the top key players, there are other players that contribute to the market growth. These include Allwinner Technology Co., Ltd (China), Spreadtrum Communications Inc. (China), Marvell Technology Group, Ltd (US), Toshiba (Japan), MediaTek Inc. (Taiwan), and Microchip Technology Incorporated (US).

Recent Development

The Year 2022

Pensando's distributed services platform expands the AMD product portfolio with a high-performance packet processor and software stack deployed at scale across cloud and enterprise customers, including Goldman Sachs, IBM Cloud, Microsoft Azure, and Oracle Cloud.

Intended Audience:

- Micro-component related associations, organizations, forums, and alliances
- Component manufacturers
- Research organizations and consulting companies
- Semiconductor product designers and fabricators
- System integrators
- Distributors and traders
- Integrated circuit designers
- Professional service/solution providers
- SoC providers
- Embedded solution providers

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