

Microprocessor, GPU, and Peripherals Market by Architecture (X86, ARM, MIPS, Power), by Application (Personal Computer, Smartphone, Tablet, Server, Embedded), by GPU Type (Discrete, Integrated), by Industry Vertical, and by Geography - Global Trends and Forecasts to 2014 - 2020

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Abstracts

A microprocessor is the most vital component of a computer and performs the task of executing programmed instructions based on the commands given to it.

Microprocessors originated from the necessity to perform fast and accurate calculations especially in the areas like military and space programs. Modern microprocessors are found in most of the electronics devices including personal computers, smartphones, media players, washing machines, automobiles, and routers. The switch of computers operating systems from text-based interfaces to graphics-based interfaces prompted the need for having a Graphics Processing Unit (GPU) for manipulating the visual content and free up the microprocessor for performing other tasks. The peripherals facilitate the communication between the microprocessor and its associated devices. Modern microprocessors are extremely compact and highly efficient devices capable of performing some of the most advanced computing tasks. Their design complexity has increased in accordance with the Moore's Law.

The market size of the overall semiconductor industry is in the range of \$300 billion. Microprocessors have an important market share in the overall semiconductor industry and its market size continues to grow at a good pace. The rising popularity of smartphones and tablets, emergence of high-speed cellular networks, and the adoption of cloud computing are playing a major role in driving the market for microprocessors. Gaming consoles continue to act as a growth drivers for GPUs. The wide-scale use of

animation in movies and advertising is further acting as a growth driver for GPUs. The declining shipments of personal computers and the emergence of low-cost mobile devices are proving to be major hurdles in the earnings of some of the key players in this industry. The market potential of applications like the Internet-of-Things and ubiquitous computing is proving to be influential in defining and reshaping the future of the microprocessor industry.

This study showcases a comprehensive overview of the global market for microprocessors, GPUs, and their associated peripherals by covering all the major market segments combined with qualitative and quantitative analysis of each of those segments. The market numbers are forecasted from 2014 till 2020, to present a glance of the huge market potential offered by this market within the forecast period from 2014 to 2020. Intel Corporation (U.S.) has remained as the market leader for microprocessors and GPU for several years now and geographically, the Asia-Pacific market occupies the major share. The report covers some of the other major stakeholders like AMD, Inc. (U.S.), ARM Holdings plc. (U.S.), NVidia Corporation (U.S.), Qualcomm, Inc. (U.S.), and Samsung Electronics Co. Ltd. (Korea); along with analysis of their current product offerings, future strategies, and a detailed competitive landscape.

Reasons to buy the Report:

From an insight perspective, this research report has focused on various levels of analysis – Industry analysis (value chain, Porter's five forces analysis), market share analysis of top players, company profiles, competitive landscape, emerging and high-growth markets for microprocessors, and their drivers, restraints, opportunities, and challenges).

This report will benefit the established firms as well as new entrants to gauge the pulse of the market, which in turn will help the firms in garnering a greater market share. The firms purchasing the report could use any one or combination of the below mentioned strategies (market penetration, product development/innovation, market development, market diversification, and competitive assessment) for strengthening their market share.

The report provides insights on the following pointers:

Market Penetration: Comprehensive information on microprocessor, GPU, and peripheral technologies offered by the major players in the microprocessor, GPU, and peripheral markets

Product Development/Innovation: Detailed insights on upcoming technologies, research and development activities, and new product launches in the microprocessor, GPU, and peripheral market

Market Development: Comprehensive information about lucrative emerging markets. The report analyzes the markets for various microprocessor, GPU, and peripheral technologies across geographies

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the microprocessor, GPU, and peripheral market

Competitive Assessment: In-depth assessment of market shares, strategies, products, and manufacturing capabilities of leading players in the microprocessor, GPU, and peripheral market

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About

A microprocessor is the most important part of personal computers and other advanced computer devices. It acts as the Central Processing Unit (CPU) and is responsible for executing programmed instructions based on the directions that it receives from various input devices. The need to simplify and speed up calculations in the fields of military, scientific research, and space programs contributed to the development of the microprocessor. Intel Corporation (U.S.) designed the first microprocessor chip in 1971 and named it Intel 4004. Since then, these chips have evolved significantly and its areas of application have also broadened with it. Modern microprocessors are found in most of the electronics devices including personal computers, smartphones, media players, washing machines, automobiles, and routers. As computers switched from text-based operating systems to graphics-based operating systems, microprocessors had to deal with the additional responsibility of generating 3-Dimensional (3D) outputs. Drawing a 3D scene using lighting effects is a mathematically-intensive task which burdened the microprocessor. Graphics Processing Units (GPUs) were introduced to accelerate the generation of 3D objects and free up the microprocessor for performing other tasks. The communication between the microprocessor and its associated devices is facilitated by the use of peripherals.

Modern microprocessors are extremely compact and highly efficient devices capable of performing some of the most advanced computing tasks. The rising popularity of smartphones and tablets, emergence of high-speed cellular networks, and the adoption of cloud computing are playing a major role in driving the market for microprocessors. Gaming consoles continue to act as a growth drivers for GPUs. The wide-scale use of animation in movies and advertising is further acting as a growth driver for GPUs. The declining shipments of personal computers and the emergence of low-cost mobile devices are proving to be major hurdles in the earnings of some of the key players in this industry. The market potential of applications like the Internet-of-Things and ubiquitous computing is proving to be the deciding factor in defining and reshaping the future of the microprocessor industry.

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