

## **Analog and Mixed Signal IP - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029**

Market Report | 2024-02-17 | 120 pages | Mordor Intelligence

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### **Report description:**

The Analog and Mixed Signal IP Market size is estimated at USD 193.82 million in 2024, and is expected to reach USD 392.73 million by 2029, growing at a CAGR of 15.17% during the forecast period (2024-2029).

The semiconductor market's downturn at the start of 2020 is significantly owing to the COVID-19 pandemic's impact on the entire industry. The lockdowns that have been enforced by the spread of COVID-19 across the world have not only affected the manufacturing of devices but also reduced consumer's demand.

According to the Consumer Technology Association, the growth rate of the consumer electronics industry in the United States fell by 2.2% in 2020, which was the first decrease in the growth rate in the consumer electronics landscape of the United States after several years.

#### Key Highlights

-Over the past decade, the integrated circuits have become increasingly complex and expensive. The industry started to embrace new design and reuse methodologies that are collectively referred to as system-on-chip (SoC), System-in-Package (SiP), and System-on-Board (SoB) design. With this shift toward miniaturization, the companies incorporating such solutions started facing the challenges for the re-usage and integration issues encountered in this paradigm shift. To solve such problems, IP blocks emerged as the most prominent solution for the industry end-users.

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-With this shift toward miniaturization, the companies incorporating such solutions started facing the challenges for the reuse

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and integration issues encountered in this paradigm shift. To solve such issues, IP blocks emerged as the most prominent solution for the industry end-users.

-The reusable components, also called intellectual property (IP) blocks or IP cores are typically synthesizable register-transfer level (RTL) designs referred to as soft cores or layout level designs, referred to as hard cores. The concept of reuse can be carried out at the block, platform, or chip levels and involves making the IP sufficiently general, configurable, or programmable for use in a wide range of applications.

## Analog & Mixed Signal IP Market Trends

### Telecommunication is Expected Hold a Significant Share

- Telecommunication infrastructure is one of the key factors driving the market, primarily owing to the advent of the 4G network and some parts of the 5G network. Manufacturers of wireless infrastructure, especially 4G and 5G networks, are continuously reducing the size and cost of their newly installed wireless infrastructure while holding towards the high standards of performance, functionality, and quality of service.
- 5G Infrastructure is expected to revolutionize the domain of various broadband services and is expected to empower connectivity across multiple end-user verticals. According to GSMA, around 45% urban coverage level has been achieved for 5G networks in the new deployment trails. Countries like China and India are also planning to implement the 5G network by 2020, and the development of 5G networks requires large amounts of capital investment in 5G capable infrastructure.
- Significant players like Intel have announced a new system on chip (SoC) designed specifically for next-generation mobile base stations in Jan 2019. Similarly, Copper-clad laminate (CCL) specialist Iteq expects orders for 5G infrastructure to pull in from China. The country is investing significantly in the development and deployment of 5G services with the government and local players like Huawei actively taking part
- Zinwell, a leading manufacturer of wired and wireless broadcast and broadband communication equipment has integrated MaxLinear's AirPHY multi-gigabit modem technology with jjPlus's latest 65W magnetic resonant wireless power module integrated with analog mixed-signal IP into its 3rd generation ZRA-003 device, which can transfer power and gigabit data through glass windows or structural walls up to 20cm thick. The solution will enhance the demand of the analog mixed-signal IP integration as the solution will enable 4G/LTE or 5G millimeter wave wireless broadband service with gigabit speeds.

### North America is Expected to Hold the Largest Market Share

- The demand for the analog and digital mixed-signal IP is driven by the growing utilization of these products as building blocks. The telecommunication sector in the US has been actively investing in 5G infrastructure. The end-user industry in the country accounts for the significant portion of the global consumption of 5G technology. In the North American region, the US dominates the regional 5G market, regarding investment, adoption, and applications.
- The nature of the 5G superfast wireless networks is expected to provide the needed primary impetus to the telecom industry, which has been experiencing slow growth. The US Telecom Association has estimated that the US telecom operators are expected to spend around USD 104 billion by 2025. It is expected to be essential for the telecom service providers to upgrade existing 4G networks to the upcoming 5G standards and, consequently, execute the full installation of 5G wireless services.
- In October 2019, Analogue announced the launch of its Analogue Game Boy Pocket, which is a modern version of the retro-gaming device. The critical component the company has introduced is the second FPGA (apart from one for image processing to deliver high-resolution image on its 10X high-resolution display compared to the original Game Boy). This second FPGA enables the retro-gaming community to build and port their cores to run other games on the Pocket, similar to how the

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MiSTER FPGA device works.

- Canada is expected to provide sufficient expenditure and funding for its military programs (including clothing). The Canadian government has been focusing on the Integrated Soldier System Project, which is assimilating the soldier suit with electronic devices, weapons, and feed communication among soldiers as they move through the battlefield. This is expected to impact the market's growth positively in the region.

## Analog & Mixed Signal IP Industry Overview

The analog and mixed signal IP is quite fragmented as the global players are engaged in integrating the signal in various applications like consumer electronics, automotive, etc., which gives an intense rivalry among the competitors. Key players are Cadence Design Systems Inc., Taiwan Semiconductor Manufacturing Company Limited, Global foundries Inc., and Samsung Electronics Co. Ltd.

- May 2020 - Synopsys, Inc. announced the broadest portfolio of high-quality IP on TSMC's 5nm process technology for high-performance computing system-on-chips (SoCs). The DesignWare IP portfolio on the TSMC process, encompassing interface IP for the most widely used high-speed protocols and foundation IP, accelerates the development of SoCs for high-end cloud computing, AI accelerators, networking, and storage applications.

Additional Benefits:

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

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