

Logic Ic Market - Growth, Trends ,Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 100 pages | Mordor Intelligence

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Report description:

The Logic IC market is anticipated to witness a CAGR of 3.4 % over the forecast period (2023 - 2028). Recent technological advancements in this field have been revealing new applications each day. The rising proliferation of smartphones, growing electric vehicle adoption, and rise of telecommunication infrastructure in both developed and developing companies are factors for which the demand for Logic IC increases. Some of the significant factors influencing the market's growth for logic integrated circuit devices are:

Key Highlights

The demand for memory devices due to the ongoing technological advancements such as artificial intelligence and their integration into the end-user devices is fostering the demand for semiconductors. Logic devices are used in application-specific integrated circuits and signal processors, accelerating market demand.

The major contributing factor is semiconductors in the deployment of 5G technology and the manufacture of smartphones. Semiconductors are used to manufacture wired communication devices such as switches, adapters, and controllers. Semiconductors used in wireless local area network adapters, mobile Wi-Fi chips, Bluetooth transceivers, global positioning system receivers, near-field communication chips, and other devices are wireless communication semiconductors. The development and growing demand for wireless technology to establish fast connections between devices are expected to increase the demand for semiconductors over the next five years.

The complexity associated with the design of logic integrated circuits can hinder the market's growth. Factors such as the high cost of manufacturing customized circuits, the cost of circuit design, and functional reliability issues are expected to hinder the market's growth for logic-integrated circuits in the coming years.

COVID-19 has a negative market impact due to a significant increase in semiconductor shortages, as the COVID-19 coronavirus continues to impact economies, trade, manufacturing, and even consumer purchasing habits. Companies manufacturing electronic products must plan carefully to avoid impending component supply chain pitfalls in 2021. The CHIPS for America Act, included in the Fiscal Year 2021 National Defense Authorization Act (NDAA), seeks to identify and alleviate short-term semiconductor shortages and encourage more US manufacturing incentives for companies to manufacture these devices in the

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United States.

Logic IC Market Trends

Growing Adoption of Logic IC in Automotive Industries

The increasing demand for electric vehicles worldwide, because of rising consumer awareness about environmental pollution and rising oil prices, is influencing semiconductor demand which has led the market of logic IC to grow.

To keep drivers safe, integrated circuits are used in vehicles. ICs improve connectivity driving and safety innovation among drivers, which is expected to fuel their market demand. The rapid electrification of vehicles is driving the growth of the automotive IC market.

According to Virta Carrying, an emissions reduction challenge that most leading nations now take seriously, 2021 is a game-changer in the history of EV sales, with 6.4 million vehicles (EVs and PHEVs combined) expected to be sold globally by the end of the year. It would then be a 98 percent increase year over year. For example, Europe (1.06 million new registrations) and China (1.149 million new registrations) are expected to have the highest share of new electric vehicle registrations in 2021, followed by the United States (297 000 new registrations).

The factors driving the global logic integrated circuit market's growth include increased vehicle production, rising demand for electric vehicles, and the growing need for electronics in vehicles to enhance their features. Additionally, several technological advancements, such as the implementation of IoT and favorable government standards for the production of autonomous, connected, and low-emission vehicles, are further fuelling the market growth of the automotive integrated circuit during the forecast period.

Asia pacific is the fastest growing region

The Asia-Pacific is one of the most profitable and leading markets for logic integrated circuits, providing stiff competition to Western regions. The emerging area in the global electric vehicle market has been on the rise, both production and sales. Looking at Asia, Japan announced it could ban new sales of ICVs in the mid-2030s to achieve net carbon neutrality by 2050. In response, the president of Toyota and the Japan Automobile Manufacturers Association, Akio Toyoda, stressed that there was room for improvement in the environmental impact and technology of ICVs.

The Thai government launched an EV action plan in 2016 to encourage the production of BEVs and PHEVs to have 1.2 million such vehicles on the road by 2036. As a result, 13 companies have benefited from preferential tax treatment for electric vehicles. Thailand announced an EV roadmap in March 2020 to produce 250,000 EVs by 2025 and establish an ASEAN EV hub.

Logic IC Market Competitor Analysis

The Logic IC Market is highly competitive and consists of several players. The market players adopt various strategies such as product innovation, mergers, and acquisitions. In addition, with the advancement in the IC manufacturing process, which provides enhanced applications, new market players are expanding their market presence and increasing their business footprint across the emerging economies.

June 2021 - A project assigned by Jack Kilby led to the development of the first integrated circuits to ever orbit the Earth - and a

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foundation for future space electronics. A line of digital logic ICs replaces the SN502 with ten times the speed and one-tenth the power requirements to help NASA reach its goal of increased computer power and reduced weight.

October 2020 - Memory backend specialist Powertech Technology (PTI) is aggressively foraying into new logic IC segments such as TV SoCs and handset APs to offset the loss of orders expected from Intel selling its NAND flash business to SK Hynix.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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