

FPGA Market by Configuration (Low-End FPGA, Mid-Range FPGA, High-End FPGA), Technology (SRAM, Flash, Antifuse), Node Size (16 nm, 20-90 nm, and >90 nm), Vertical and Region (North America, Europe, APAC, RoW) - Global Forecast to 2027

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Report description:

The FPGA market is projected to grow from USD 8.0 billion in 2022 and is projected to reach USD 15.5 billion by 2027; it is expected to grow at a CAGR of 14.2% from 2022 to 2027.

The growth of this market is driven by factors such as increasing adoption of robotics and Industry 4.0, rising demand for FPGAs in advanced driver assistance systems (ADAS) and increasing penetration of data centers across the globe.

"Market for flash technology segment to grow at the high CAGR during the forecast period."

The flash segment of the FPGA market is projected to record the highest CAGR during the forecast period. The high growth rate is attributed to several industry participants emphasizing developing technically advanced flash-based products to cater to the high demand for energy-efficient FPGA solutions in the market. For instance, in March 2022, Cobham Advanced Electronic Solutions (US) developed new radiation-hardened NOR Flash memory targeted for FPGAs that have applications in the aerospace sector.

The new 1Gb monolithic NOR Flash memory is specifically designed for space applications and meets the needs of high-end FPGAs, including Certus NX-RT and CertusProNX-RT from Lattice Semiconductor Corporation (US) and RT Kintex UltraScale FPGA from Xilinx, Inc. (Advanced Micro Devices, Inc.) (US).

"The 20-90 nm node size segment will hold high market share during the forecast period."

The 20-90 nm node size segment will witness a high market share during the forecast period. FPGAs with node sizes ranging from 20 nm to 90 nm offer high-temperature tolerance, consume less power, and act as digital signal processing (DSP) solutions. They have embedded multipliers and offer high density, increased memory, and ease of packaging. These intuitive features increases the demand for FPGAs with 20-90 nm node sizes across industrial networks, vehicle networking and connectivity, high-resolution videos and graphics, 10G to 100G networking, and portable radars applications.

"Asia Pacific will be the fastest growing region in FPGA market during the forecast period"

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Asia Pacific is expected to be the fastest-growing region in the FPGA market during the forecast period. Market growth is driven by the semiconductor and electronics manufacturing sector in the China that demand various test and measurement equipment in their facilities. The country has around 293 semiconductor wafer fabrication, IC testing, and packaging plants located across 20 provinces in China. Plant facilities require various equipment such as automated test equipment, assembly & packaging equipment, Lithography system, and wafer manufacturing equipment. This equipment is incorporated with FPGAs as functional enhancements can be done without spending time redesigning hardware or modifying the board layout. It reduces time to market and requires low development cost as compared to ASIC (Application Specific Integrated Circuit) based system.

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key industry experts in the FPGA space. The break-up of primary participants for the report has been shown below:

- By Company Type: Tier 1 - 50%, Tier 2 - 30%, and Tier 3 - 20%
- By Designation: C-level Executives - 10%, Directors -20%, and Others - 70%
- By Region: North America -20%, Europe - 15%, Asia Pacific- 55%, and RoW - 10%

The report profiles key players in the FPGA market with their respective market ranking analysis. Prominent players profiled in this report are include Xilinx, Inc. (Advanced Micro Devices, Inc.) (US), Intel Corporation (US), Microchip Technology Inc. (US), Lattice Semiconductor Corporation (US), Achronix Semiconductor Corporation (US), QuickLogic Corporation (US), Efinix, Inc. (US), Flex Logix Technologies, Inc. (US), GOWIN Semiconductor Corporation (China), and S2C (China). Apart from these, Renesas Electronics Corporation (Japan), AGM Microelectronics (China), Shanghai Anlu Information Technology Co., Ltd. (China), Shenzhen Ziguang Tongchuang Electronics Co., Ltd. (China), Xi'an Zhiduoji Microelectronics Co., Ltd. (China), LeafLabs, LLC (US), Aldec, Inc. (US), and Mistral Solutions Pvt. Ltd. (India), are among a few emerging companies in the FPGA market.

Research Coverage:

This research report categorizes the FPGA market on the basis of configuration, node size, technology, vertical and region. The report describes the major drivers, restraints, challenges, and opportunities pertaining to the FPGA market and forecasts the same till 2027. Apart from these, the report also consists of leadership mapping and analysis of all the companies included in the FPGA ecosystem.

Key Benefits of Buying the Report

The report would help leaders/new entrants in this market in the following ways:

- 1.□This report segments the FPGA market comprehensively and provides the closest market size projection for all subsegments across different regions.
- 2.□The report helps stakeholders understand the pulse of the market and provides them with information on key drivers, restraints, challenges, and opportunities for market growth.
- 3.□This report would help stakeholders understand their competitors better and gain more insights to improve their position in the business. The competitive landscape section includes competitor ecosystem, product developments and launches, partnerships, and mergers and acquisitions.
- 4.□The analysis of the top 25 companies, based on the market rank as well as the product footprint will help stakeholders visualize the market positioning of these key players.
- 5.□Patent analysis, trade data, and technological trends that will shape the market in the coming years has also been covered in this report.

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