



## ASIC Global Market and Trend

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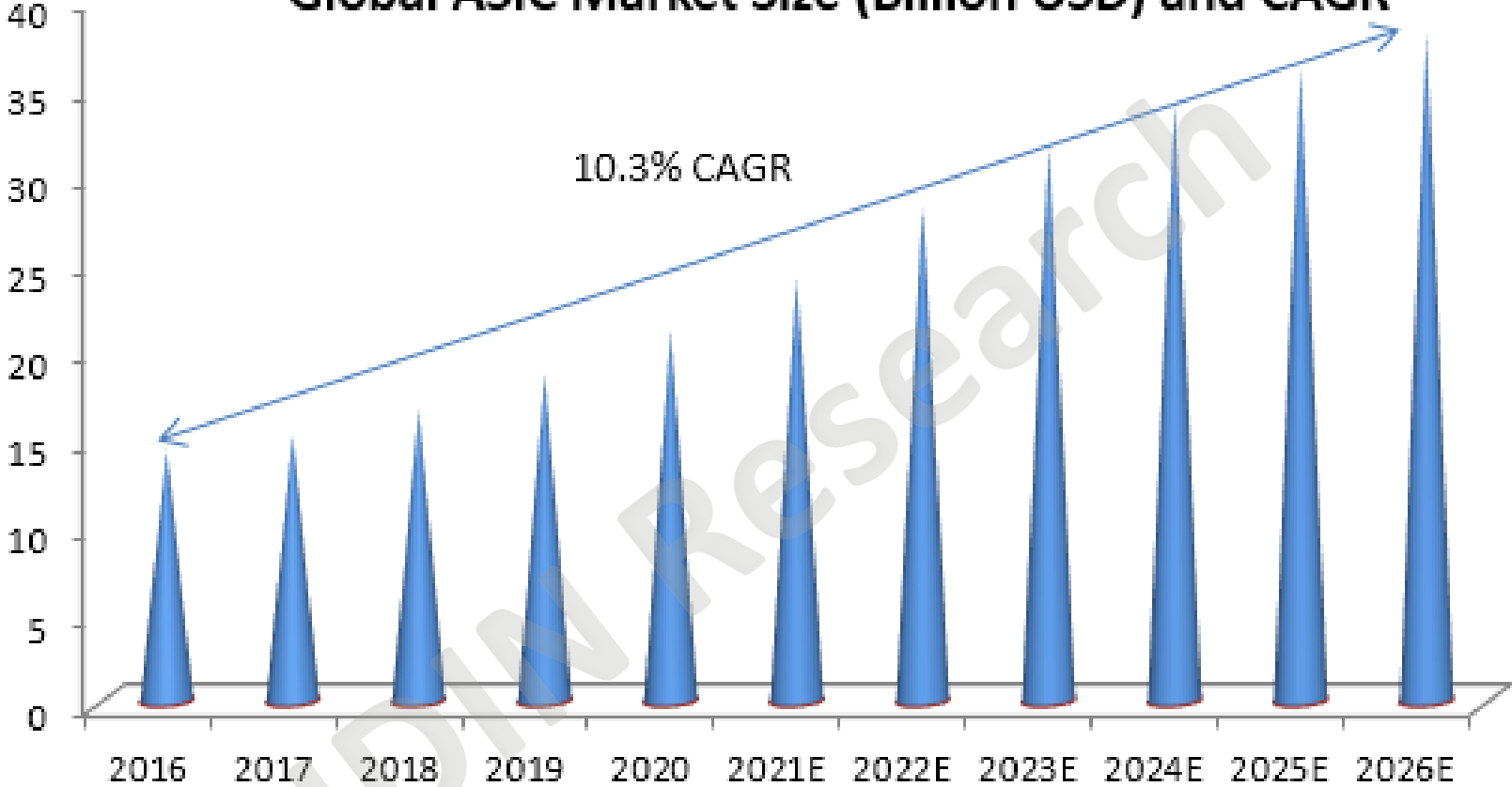
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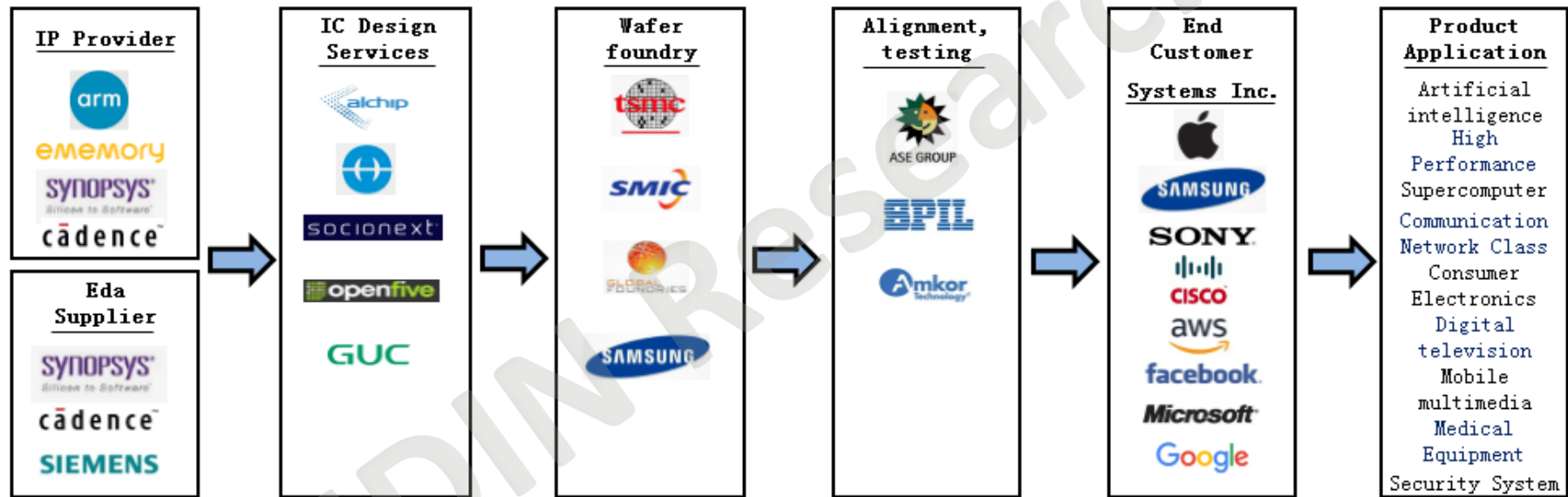
An integrated circuit (IC) is an assembly of electronic components with miniature devices built upon a semiconductor substrate. With the enlargement of the scale of IC and the specific needs of more and more users, the demand for Application-Specific Integrated Circuit (ASIC), which is characterized by users' participation in design, increases very rapidly. ASIC chip is the most customized integrated circuit, which can realize the optimization design of the whole system and meet the needs of specific users. Compared with general IC, the advantages of ASIC include smaller size, lower power consumption, improved reliability, improved performance, enhanced confidentiality, and lower cost. ASIC can be divided into full-custom ASIC chips, semi-custom ASIC chips and programmable ASIC chips.

In 2016, the global ASIC market was about the US \$14.2 billion. Driven by the demand for 5G, artificial intelligence and high-performance computing, as well as the active deployment of 3D IC packaging technology by wafer foundries, the global ASIC market is expected to reach the US \$38 billion in 2026, with a CAGR of 10.3%.

# Global ASIC Market Size (Billion USD) and CAGR



At present, there are two operation modes in the IC industry. One is the IDM mode, which integrates chip design, chip manufacturing, chip packaging and testing. The second is the fabless mode, which is only responsible for the circuit design and sales of chips and outsources the production, testing, packaging. The fabless model is more popular with users because of its lighter assets, less difficulty in starting a business and relatively flexible transformation. The following is the industrial chain structure chart of Fabless ASIC.



ASIC is mainly used in intelligent security, intelligent medical treatment, computer and high-performance computing, communications, automatic driving, consumer electronics and industrial fields. Among them, image recognition ASIC is mainly used in the field of intelligent security, accounting for the largest market share.

## Global ASIC Market Share by Type

