

Server Microprocessor Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The server microprocessor market was valued at USD 15.19 billion in 2020 and is expected to reach USD 17.89 billion by 2026, at a CAGR of 2% over the forecast period 2021 - 2026. Increasing data center footprint and demand from cloud service providers prompts the growth of the server microprocessor market. Dominated by the duopoly of Intel and AMD, the market for server microprocessors is undergoing product innovations. Companies are realizing the performance needs for modern workloads such as data analytics, Machine Learning, Artificial Intelligence and are improving their designs accordingly.

Key Highlights

The expansion of mobile broadband, growth in big data analytics and cloud computing are driving the demand for new data center infrastructures. As of 2017 US holds almost 45% of the global cloud and internet data centers according to CNNIC. North America alone(US and Canada) house around 2854 data centers as of 2017, making it a prominent market for the server microprocessors. In line with global cloud penetration, cloud service providers such as Google, are expanding their data center footprint across regions to keep up with the demand for high-performance computing. Such trends drive the server microprocessors.

Server Microprocessor Market Trends

Open Instruction Set Architecture(ISA) to Gain Traction Amid US-China Trade War

The trade war between China and the United States may have certain impact on the market. this is considering US companies(Intel), as well as ARM, that have pledged to cut off Huawei's access to critical semiconductor components, such as

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SoCs and CPUs. This might trigger increased dependency on open-source Instruction Set Architecture (ISA) such as MIPS, RISC-V, etc. For instance, in July 2019, Alibaba Group unveiled its first self-designed microprocessor, which marks a key step in China's efforts to promote chip self-sufficiency. The launch prompts the efforts of the Chinese technology giants to address the trade clashes with the U.S. (over access to technology). Alibaba's (not produced by itself, but some other Chinese foundry such as Semiconductor Manufacturing International Corp.) has been designed to power consumer devices such as smart speakers, self-driving cars or other internet-connected equipment requiring high-performance computing.

Huawei is also seeking US Independence for their processors. The company although obtained license for ARMv8 architecture, expressed that it would consider using RISC-V in the future if the US government restrictions persist.

On the other hand, companies such as ARM, Marvell, among others, have been extending technology partnerships to launch an alternative to the x86 computing market.

Europe Making Efforts to Develop Key Competence in Microprocessors

Europe is estimated to provide significant scope for servers powered by microprocessors as the compute-intensive applications and cloud adoption is increasing. Cloud computing is one of the strategic digital technologies that has been promoted by the European Union for enhancing productivity and better services by enterprises. These initiatives provide significant demand for data centers in the region, thus driving the market.

Although North America has been a larger source for Server Microprocessors, regional initiatives such as the European Processor Initiative (EPI) is likely to have an impact on the market.

The European Commission, in December 2018, declared the selection of the Consortium European Processor Initiative (EPI). The aim of the initiative is to "develop, co-design, and introduce a low-power microprocessor to the European market", thus being able to retain a significant part of that technology in Europe.

The EPI consortium proposes to create a long-term economic model by delivering a family of processors for the following markets: High-Performance Computing, Data centres and servers, and Autonomous vehicles.

Server Microprocessor Market Competitor Analysis

Server Microprocessor Market has been dominated by Intel since the past few years, with AMD as the close competitor and other low-volume players like IBM, Oracle among others. The market demands strong investments in R&D and technology partnerships to address the needs of the servers and data centers. AMD is likely to cut through a slight share of Intel in the server microprocessor market, considering the new product rollouts and competitive pricing strategy. Vendors in the market have been involving in the launch of new microprocessors for next-generation data centers. Following are the recent developments in the market:

May 2018 - Cavium announced the general availability of ThunderX2, their second generation of Armv8-A SoC processors for next-generation data center, cloud and high-performance compute applications. The company, recently acquired by Maxwell, worked with over 60 different partners (including OEMs, ODMs, and independent software and hardware vendors) to enable the deployment of ThunderX2 based platforms and finally reached the commercialization phase.

June 2019 - Marvell (parent company of Cavium) announced a broader strategic partnership with Arm, to accelerate the design and development of next-generation Marvell ThunderX server processor technology. With this new agreement Arm will support Marvell's R&D in the server processor technology area for at least three more years (until 2022). With this partnership, Marvell aims to expand its Arm-based server roadmap to enable the next generation of cloud and data center infrastructure.

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