

Data Processing Unit Market By Type (ASIC-Based, FPGA-Based, SOC-Based), By Data Center Type (Colocation, Hyperscale, Edge, Others), By Application (BFSI, IT and Telecom, Government, Energy and Utilities, Others): Global Opportunity Analysis and Industry Forecast, 2021-2031

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Report description:

A data processing unit is a channel controller, a programmable specialized electronic circuit with hardware acceleration of data processing for data-centric computing. The data is transmitted to and from the component as multiplexed packets of information. A DPU generally contains a CPU, NIC and programmable data acceleration engines. This allows DPUs to have the generality and the programmability of central processing units while being specialized to operate efficiently on networking packets, storage requests or analytics requests. Organizations can implement DPUs with field programmable gate arrays (FPGAs), application-specific integrated circuits (ASICs), or proprietary systems on a chip (SOCs). These devices accelerate a number of tasks including network and storage functions concerned with data protection, security, and encryption as well as data footprint optimization and high availability, further fueling the market growth.

The data processing unit market is segmented on the basis of type, data center type, end-user, and region. By type, the market is divided into ASIC-based, FPGA-based and SOC based. By data center type, it is divided into colocation, hyperscale, edge and others. By application, it is segmented into BFSI, IT & telecom, government, energy & utilities and others.

Region wise, the data processing unit market trends are analyzed across North America (the U.S., Canada), Europe (UK, Germany, France, Italy, Spain and rest of Europe), Asia-Pacific (China, Japan, India, South Korea, and rest of Asia-Pacific) and LAMEA (Latin America, the Middle East, and Africa). Most of the companies operating in the market are based out of North America.

Moreover, owing to the presence of large number of data centers is creating lucrative opportunities for the market growth in the North America region. Major organizations and government institutions in the country are intensely putting resources into the technology.

Key players operating in the market include data processing unit market players, such as Intel Corporation, Marvell Technology,

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NVIDIA Corporation (Mellanox Technologies), Kalray, Broadcom Corp, Advanced Micro Devices, Inc. (Pensando Systems Inc.), Fungible, inc. and Resnics /Yisixin Technology (Shanghai) Co., Ltd.

Key Benefits For Stakeholders

- This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the data processing unit market analysis from 2021 to 2031 to identify the prevailing data processing unit market opportunities.
- The market research is offered along with information related to key drivers, restraints, and opportunities.
- Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.
- In-depth analysis of the data processing unit market segmentation assists to determine the prevailing market opportunities.
- Major countries in each region are mapped according to their revenue contribution to the global market.
- Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.
- The report includes the analysis of the regional as well as global data processing unit market trends, key players, market segments, application areas, and market growth strategies.

Key Market Segments

By Data Center Type

- Colocation
- Hyperscale
- Edge
- Others

By Type

- ASIC-Based
- FPGA-Based
- SOC-Based

By Application

- BFSI
- IT and Telecom
- Government
- Energy and Utilities
- Others

By Region

- North America
- U.S.
- Canada
- Europe
- Rest Of Europe
- UK
- Germany
- France
- Italy
- Spain
- Asia-Pacific
- China
- Japan
- India
- South Korea
- Rest Of Asia-Pacific

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- LAMEA
- Latin America
- Middle East
- Africa
- Key Market Players
- NVIDIA Corporation (Mellanox Technologies)
- Marvell Technology Inc.
- Fungible, Inc.
- Broadcom Inc.
- Intel Corporation
- kalray
- Resnics /Yisixin Technology (Shanghai) Co., Ltd.
- Advanced Micro Devices, Inc. (Pensando Systems Inc.)

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