Data Center Cooling - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Data Center Cooling Market size was estimated at USD 16.56 billion in the current year to USD 34.51 billion in five years, registering a CAGR of 15.82% during the forecast period.

Due to the high computational needs of AI and media applications, data centers are being deployed increasingly. Moreover, the adoption of edge computing and this growth will be helped by a growing share of Internet of Things devices.

Key Highlights
-The market for liquid cooling of data centers is predicted to show substantial growth due to the increase in digitization leading to greater computer performance, and it requires a large number of small chips to be integrated. The design of data centers and the need to cool them are influenced by powerful computer hardware for Artificial Intelligence (AI) workloads. Manufacturers are introducing large silicon chips to optimize the performance of artificial intelligence and high-performance computing workloads. The use of powerful GPUs in artificial intelligence and high-performance computing environments supports the need for data center cooling technologies.
-The increasing use of OTT and streaming services has led to a growth in data, driving market development. Increased data from online streaming services such as Disney+ Hotstar, Hulu, and Netflix will drive the demand for data center cooling systems with effective cooling performance. There is a growing need to ensure that Data Center Cooling Service Providers have the capacity and ability to provide efficient products during peak traffic periods on the market.
-The Green Data Centre is the place where you store, manage, and distribute your data. It is planned that mechanical, lighting, electrical, and computer systems will be as energy efficient as possible while minimizing their adverse environmental impacts. Innovative methods and technologies are used to construct and manage green data centers. Data centers' energy consumption is increasing significantly due to the exponential growth and use of the Internet. Due to the environmental impact, increase in public

awareness, higher energy costs, and governmental action, companies are under increased pressure to adopt green policies. The development of the sustainable data center has directly impacted the Data Centres Cooling Market due to these factors.
-However, the market's growth is hampered by the need to adapt and power shortages. A standard, standardized, modular data center air conditioning system is required. With companies looking to reduce costs and not willing to spend a lot of money on high-end customized cooling systems, they need to be scalable and flexible enough to meet data center needs that are very challenging today.
-The COVID-19 outbreak negatively influenced a cooling market for data centers. Temporary suspension of activities has been imposed on enterprises, such as the consolidation of data centers. Due to mandatory social distance rules, physical changes of servers, building closures, and opening new facilities were more complicated. This has led to an unprecedented demand for data centers across the world. However, tremendous savings have shifted to upfront CapEx investments in IT following the pandemic. In addition, the use of cloud services has increased, and there is a need for new technological and operating skills. Therefore, the growth in the need for a data center cooling market is expected to be supported by this factor and an upward trend over the forecast period.

Data Center Cooling Market Trends

Information Technology Industry to Witness Highest Growth

- For its business, the information technology industry requires on-premises storage of personal data and hyperscale data centers for operation in sizes ranging from small to large. Additionally, the adoption of cloud storage has been increasing over the years. As a result, the demand for data center cooling systems is expected to grow due to the growth of Software as a Service provider, enabling cloud storage providers to expand their capacity.
- To provide more efficient work processes, cloud storage providers such as Microsoft, AWS, and Google are expanding their capacity to store in the cloud. These companies make their investments in hyperscale transactions. As the heat generated by the new tensor processing units exceeds the limits of its previous cooling solutions in the data center, Microsoft and Meta joined Google in June 2022 to use artificial intelligence to help manage their data centers.
- The IT market consists of selling IT services and related products by organizations, sole traders, and partnerships that use computer telecommunications equipment to store computer peripherals and retrieve, transmit, and move data. Computer networks, television broadcasting, system design services, information distribution technologies such as telephony, and other devices involved in this process are part of the IT market. Such enormous requirements and equipment drive the demand of the data center air conditioning market to be cooled typically.
- Given the need for enhanced, high-quality, More Effective AirCooling Solutions, which are more efficient than conventional aircooled solutions, installing a Cooling System in IT and Data Centres is vital. This market growth is also stimulated by the increasing technological innovation of IT infrastructure and increased demand for cooling systems among mobile phone manufacturers to manage heat.
- Despite the rapid development of cloud services, there is considerable reliance on Onpromise and hybrid data centers in today's industry. These undertakings are trying to expand their data storage capacity, which is expected to increase demand for air conditioners or heating equipment in their supply systems. In addition, there is an increased need for more efficient data storage solutions due to the trend towards agile and DevOps operating frameworks in the IT sector.

Asia Pacific to Register a Significant Growth

- Asia Pacific will be a significant market driver in the future. Due to the increasing demand for data generation and government

policies promoting more energy-efficient infrastructure in China, China is one of the most important Data Center Cooling Solutions markets based on recent innovations such as IoT, ML, and AI. The second-highest growth has been recorded in India, driven by the increased adoption of Internet services and a large volume of data.
- The rapidly growing number of data centers in China, along with the government policies to promote more environmentally sound infrastructure across the country, is one of the leading markets for Data Center Cooling Solutions.
- Moreover, China is the fastest-growing market for data centers worldwide. This expansion presents a tremendous opportunity for the participants in the study to gain market share, given the development of fintech and digital transformation in the country.
- Due to increasing internet penetration in Asia Pacific, the data center cooling market is expected to grow significantly. The demand for data centers in the region is growing considerably as mobile computing, the Internet of Things, and cloud computing play an essential role. This also gives rise to a thriving Data Center Cooling Market.

Data Center Cooling Industry Overview

The data center cooling market is fragmented as the benefits offered by the technology and support from the government by imposing efficiency regulations on data centers are expected to help the growth of the data center cooling market directly. Market penetration is growing with a strong presence of major players in established markets. With the increasing focus on innovation, the demand for new technologies is growing, which, in turn, is driving investments for further developments. Key players include Vertiv Co., Schneider Electric SE, and STULZ GMBH.

In April 2023, Asetek, Inc. announced that ASUS had introduced its third generation of ROG RYUJIN all-in-one CPU coolers for high-end builds, The RYUJIN III 240/360 and RYUJIN III 240/360 ARGB CPU coolers combine extreme overclocking capability, silent operation, and next-gen aesthetics to provide the ultimate in gameplay experiences and next-level performance.

In March 2023, Daikin acquired Alliance Air Products, a San Diego-based leader in custom air-handling equipment design and manufacturing. The combined capabilities of Daikin and Alliance Air address these industry requirements, including chiller-to-computer room air-handler (CRAH) systems that help mitigate a data center's environmental impact. These systems ensure an optimal balance between energy and water savings.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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