

Brazil Data Center Cooling - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2030)

<https://marketpublishers.com/r/BD6E28385AEFEN.html>

Date: July 2024

Pages: 120

Price: US\$ 4,750.00 (Single User License)

ID: BD6E28385AEFEN

Abstracts

The Brazil Data Center Cooling Market size is estimated at USD 110.5 million in 2024, and is expected to reach USD 194.80 million by 2030, growing at a CAGR of 9.10% during the forecast period (2024-2030).

Key Highlights

The increasing demand for cloud computing among SMEs, government regulations for local data security, and growing investment by domestic players are some of the major factors driving the demand for data centers.

Under Construction IT Load Capacity: The upcoming IT load capacity of the Brazilian data center market is expected to reach more than 1,205.37 MW by 2029.

Under Construction Raised Floor Space: The country's construction of raised floor area is expected to increase above 2.28 million sq. ft by 2029.

Planned Racks: The country's total number of racks to be installed is expected to reach above 231802 units by 2029.

Planned Submarine Cables: There are many under construction. One such submarine cable that is estimated to start service in 2023 is Firmina, which stretches over 14,517 km with landing points in Las Toninas, Argentina, Praia Grande, Brazil, Myrtle Beach, SC, the United States, Punta del Este, Uruguay.

New data centers across the country focus on implementing state-of-the-art monitoring

systems to mitigate the risks associated with extreme weather events, and many would use the latest, more energy-efficient cooling technologies, such as redundant cooling systems, smart monitoring technologies, and backup power generators to ensure consistency of temperature in the event of power interruptions. Another example is direct liquid cooling, which uses a higher thermal transfer of water to a more efficient cooling device.

The average winter temperature is between 13 °C (55 °F) and 18 °C (65 °F). The average summer temperature is between 22 °C (72 °F) to over 26 °C (79 °F). Winters can vary widely across the country, with frequent cold, fog, and snow periods in the north and more pleasant weather in the south. Depending upon climatic conditions, the DC cooling is done in the DC facilities.

Brazil Data Center Cooling Market Trends

IT and Telecom to Have Significant Market Share

Among end-user industries, the cloud segment is expected to hold the largest market share and witness the fastest growth during the forecast period. Cloud services are essential for enabling SME growth, fostering innovation, closing the digital divide, saving public spending, and enhancing public services.

Additionally, it is anticipated that the end users in the manufacturing, media and entertainment, financial services, and e-commerce sectors would accelerate the expansion of IT load capacity through increased data consumption. The Mexican government has launched research and development initiatives through the Secretariat of Economy and the National Council of Science and Technology (Conacyt) to spark Industry 4.0 in the country.

SENER (the Secretariat of Energy), SICT (the Secretariat of Infrastructure, Communication, and Transportation), and SAGARPA (the Secretariat of Agriculture and Rural Development) are working on Industry 4.0 projects that encourage innovation to help the country's economy. Internet shopping would add to the rising data consumption as the user base increases. Due to the tempting bargains being offered, customers are expected to be more likely to shop online, which would increase demand for digital payment systems and website traffic, increasing data consumption further. The aggregate of all these influences would result in a significant rise in consumption, which is expected to drive the demand for data centers in the region.

Liquid Cooling to Have Significant Share

In data centers, liquid cooling offers many benefits, and it is an attractive option for cooling computing environments with high performance. The use of liquid cooling has been shown to be more energy-efficient compared with conventional air conditioning. It reduces the need for overcooling and improves the energy efficiency of data centers by providing precise temperature control.

Technological advances have helped to reduce the data center's water consumption by more than 15% in tropical climates and 80% in green areas, making liquid cooling easier to maintain, scale up, or be affordable. Energy used for liquid cooling may be recycled to heat buildings and drinking water, while advanced artificial refrigerants can significantly reduce the carbon footprint of air conditioners.

Liquid cooling takes advantage of the space constraints and superior heat transfer properties of water or other liquids to provide efficient and cost-effective cooling of high-density racks up to 3,000 times more efficiently than air. Long proven in mainframe and gaming applications, liquid cooling is increasingly being used to protect rack servers in regional data centers. Recently, Vertiv introduced a water-efficient liquid cooling solution for high-density data centers, the Liebert XDU, a new generation of thermal management systems that supports liquid-cooled servers and enables the control of liquid quality, flow, and pressure.

Furthermore, the government is expected to make more investments to innovate in areas such as quantum computing, artificial intelligence, and applications utilizing 5G and 6G technologies. Such aspects are expected to complement the growth and demand for data processing facilities in the telecom industry, which is expected to fuel the demand for DC cooling infrastructure in the country.

Brazil Data Center Cooling Industry Overview

The Brazilian 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 such as

Schneider Electric SE, Rittal GMBH & Co.KG, Mitsubishi Electric Hydronics & IT Cooling Systems SpA, Johnson Controls International PLC, and Asetek A/S.

April 2024: Carrier Global Corporation partnered with Strategic Thermal Labs for the development of direct-to-chip cooling technology. Under this partnership, Carrier will leverage the advancement in direct-to-chip technology and incorporate it into its data center cooling solutions.

December 2023: Vertiv completed the acquisition of Cooltera Ltd, a manufacturer of coolant distribution units (CDU) and secondary fluid networks (SFN). This acquisition is expected to improve the existing DC cooling solutions offered by the company.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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