# Indonesia Data Center Cooling - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2030

Market Report | 2024-02-17 | 90 pages | Mordor Intelligence

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**Report description:**

The Indonesia data center cooling market reached a value of USD 198.8 million in the previous year, and it is further projected to register a CAGR of 13% during the forecast period.

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 in the country.
-The upcoming IT load capacity of the Indonesia data center market is expected to reach more than 1400 MW by 2029. The country's construction of raised floor area is expected to increase above 4.3 million sq. ft by 2029.
-The country's total number of racks to be installed is expected to reach above 2,18,000 units by 2029. Greater Jakarta is expected to house the maximum number of racks by 2029. The average annual temperature in Indonesia ranges between 23 degrees celsius and 28 degrees celsius across the country. Depending upon climatic conditions, the data center cooling is done in the data center facilities.
-There are close to 58 submarine cable systems connecting Indonesia, and many are under construction.

Indonesia Data Center Cooling Market Trends

Liquid-based cooling is the fastest growing segment

- Technological advances have made liquid cooling easier to maintain, more scalable, and more affordable, reducing data center

liquid consumption by more than 15% in tropical climates and by 80% in greener areas. The energy used for liquid cooling can be recycled to heat buildings and water, and advanced artificial refrigerants can effectively reduce the carbon footprint of air conditioners.
- Liquid cooling takes advantage of the superior heat transfer properties of water or other liquids to support efficient and cost-effective cooling of high-density racks, up to 3000 times more effective than using air. Long proven in mainframe and gaming applications, liquid cooling is increasingly being used to protect rack servers in data centers across the region.
- Direct liquid cooling (DLC) solutions achieve partial power usage effectiveness (PUE) of 1.02 to 1.03, outperforming the most efficient air cooling systems by low single-digit percentages. However, PUE is not responsible for much of the DLC's energy gain. Traditional servers have fans that use power from the rack, so control is included in the IT power section of his PUE. These are considered part of the data center payload.
- Water cooling can be essential in minimizing emissions and reducing climate disturbance. Data centers using water as a cooling substance use about 10% less energy than most air-cooled data centers, emitting about 10% less CO2. In 2021, water cooling could reduce energy-related CO2 emissions in the data center portfolio by about 300,000 tonnes.
- COVID-19 had a major impact on the growth of data traffic per smartphone. The restricted movement of the populace was implemented in March 2020, and ever since, the average screen time has significantly increased. Mobile data was predominantly utilized for a variety of purposes, including accessing general news, streaming content, and engaging in online education.
- For instance, there was a notable 35% surge in over-the-top (OTT) consumption from February 2020 to April 2020, with the average screen time surpassing 3 hours for online streaming content during the pandemic. As data traffic continues to grow, it necessitates the operation of a substantial number of servers concurrently, resulting in the generation of significant heat. This escalating demand is expected to drive an increased need for liquid cooling solutions in the country in the coming years.

IT & Telecommunication is the largest segment

- Indonesia's digital economy is expected to add USD 150 billion to GDP by 2025. The Indonesian government is undertaking large-scale infrastructure development to achieve this goal. The government has launched several national initiatives such as the 100 Smart Cities Movement, e-Smart IKM, and Go Digital Vision 2020 as part of the digital transformation.
- According to the Chief Economist of the Economist Intelligence Unit, Indonesia is a good place to invest in digital technology because it is the largest market in Southeast Asia. Due to the potential of cloud business, many digital giants are building data centers in the country. As a result, cloud computing offers a range of benefits that match its operations and goals. The government has recognized the importance of cloud migration to the country's digital economy development and has announced plans to facilitate adoption through further regulatory development.
- The Ministry of Communications and Information has created the Digital Indonesia 2021-2024 Strategy. Digital infrastructure, digital governance, digital economy, and digital society are the four main focus areas of the draft. This roadmap outlines Indonesia's policy objectives, implementation plans, and timeline for digital transformation. Another goal is to distribute the digital economy more fairly across the region.
- The telecommunication sector will maintain its dominance due to the growing adoption of 5G networks among users. The 5G mobile data speed is expected to increase significantly, reaching 259.3 Mbps by 2029. This suggests increasing data traffic and growing demand for data center servers in the market.
- Indonesia's digital economy is growing rapidly, owing to the increasing adoption of digitalization and well-known online marketplaces such as Tokopedia and GoJek. Enabling three stages of future cities: smart cities (comfortable, livable, and safe), greener cities (climate change and disaster resistant), and competitive, technology-based smart cities. To do so, the Indonesian government has launched a smart city. City Vision Indonesia 2015-2045. Thus, the demand for data center facilities would increase the rising demand for better cooling equipment in facilities.

Indonesia Data Center Cooling Industry Overview

The Indonesia data center cooling market is moderately competitive and has gained a competitive edge in recent years. Currently, a few major players, including Stulz GmbH, Schneider Electric SE, Vertiv Group Corp., Johnson Controls International PLC, and Emerson Electric Co., dominate the market.

In March 2023, STULZ, a Hamburg-based mission-critical air conditioning company, made a significant announcement regarding its industry-leading CyberAir 3PRO DX series. Some units within this series are now equipped to utilize the low global warming potential (GWP) refrigerant R513A. This breakthrough development underscores the company's unwavering commitment to providing sustainable air conditioning systems for data centers. Additionally, STULZ has initiated further product transitions across its portfolio to expand the use of the R513A refrigerant.

Additional Benefits:

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

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