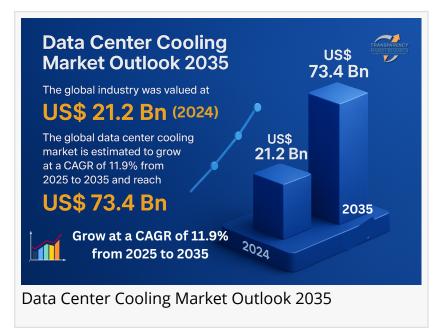


# Data Center Cooling Market Size Forecast to USD 73.4 Billion by 2035 with a Focus on Energy-Efficient Infrastructure-TMR

Data Center Cooling Market Outlook 2035: USD 73.4 Billion Opportunity Driven by Al Workloads and Green Data Centers – TMR Analysis

WILMINGTON, DE, UNITED STATES, October 16, 2025 /EINPresswire.com/ --<u>Data Center Cooling Market</u> Outlook 2035

The global data center cooling market is witnessing strong growth, driven by the rapid expansion of cloud computing, Al workloads, and hyperscale data centers. Valued at US\$



21.2 Billion in 2024, the market is projected to expand at a CAGR of 11.9% from 2025 to 2035 and reach US\$ 73.4 Billion by 2035. Rising demand for energy-efficient, sustainable, and liquid-based cooling systems is significantly influencing market dynamics as global data infrastructure scales to meet digital transformation needs.



Data Center Cooling Market
Projected to Hit USD 73.4
Billion by 2035 Amid Rising
Demand for Sustainable and
High-Density Computing"
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Analysts' Viewpoint on the Global Data Center Cooling Market

The global data center cooling market is set to witness

robust growth driven by the surging demand for high-performance computing, cloud infrastructure, and Al-driven services. As a critical part of overall data center infrastructure, the market is seeing rising adoption of sustainable and energy-efficient cooling technologies to

manage escalating heat loads.

Innovations such as immersion cooling, liquid-based systems, and AI-enabled thermal management are gaining momentum amid growing concerns about energy consumption and environmental impact. The expansion of hyperscale and edge data centers further underscores the need for efficient and cost-effective cooling systems, with the focus shifting toward reducing operational expenses and enhancing system reliability.

A notable trend is the move toward modular and scalable cooling architectures to support diverse data center deployment models. Green cooling technologies are also attracting increased investment as organizations align with regulatory mandates and ESG objectives. Strategic partnerships between data center operators and cooling solution providers are shaping the competitive landscape, signaling a period of sustained growth, innovation, and market consolidation in the years ahead.

#### Market Overview

Data center cooling systems are essential for maintaining optimal temperature and humidity levels to ensure uninterrupted performance and longevity of servers, networking, and storage equipment. As data centers become denser and more powerful, advanced cooling solutions are necessary to manage thermal loads efficiently.

The data center cooling market comprises a wide range of technologies and services designed to manage and dissipate heat generated by servers and other IT infrastructure within data centers. As these facilities house high-capacity computing systems, maintaining optimal temperature levels is essential to ensure equipment performance, reliability, and longevity.

With the rapid expansion of data usage, cloud computing, and Al-driven applications, data centers are undergoing transformative changes. These shifts have resulted in higher heat loads and increased energy consumption, driving demand for advanced cooling techniques such as liquid cooling, free-air cooling, and evaporative cooling.

Furthermore, sustainability has become a central focus for market players. Organizations are prioritizing energy-efficient and eco-friendly cooling solutions to reduce operational costs and align with environmental standards. For instance, the United Nations Environment Programme's (UNEP) United for Efficiency (U4E) initiative has introduced the Sustainable Procurement Guidelines for Data Centers and Servers, which outline performance benchmarks and operational parameters to promote energy-efficient and sustainable data center infrastructure.

Analysis of Key Players in the Data Center Cooling Market

- Vertiv Group Corp.
- Carrier
- Johnson Controls.

- Siemens
- Schneider Electric
- GRC
- Dell Inc.
- FLEX LTD
- Modine
- Munters AB
- Boyd
- STULZ GMBH
- Black Box
- Delta Power Solutions
- ALFA LAVAL
- Other Prominent Players

Each company is profiled in the market report with insights into their business overview, strategies, financial performance, business segments, product portfolio, and recent developments.

## **Key Developments**

- March 2025: Vertiv Group Corp. announced a collaboration with U.S.-based clean energy company Tecogen Inc., enabling the integration of Tecogen's ultra-efficient, natural gas-powered chiller technology into Vertiv's global data center cooling solutions.
- June 2025: Green Revolution Cooling, Inc. received new financing from major investors, including Samsung Ventures, HTS, SK Enmove, and ENEOS. In addition, Samsung C&T formed a strategic partnership with the company to further expand its offerings.

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### **Key Growth Drivers**

- 1. Rising Cloud & Al Workloads Demand for cooling efficiency to support high-performance computing.
- 2. Sustainability Mandates Increasing adoption of green cooling technologies and renewable-powered systems.
- 3. Expansion of Edge Data Centers Need for localized, compact cooling solutions.
- 4. Technological Advancements Growth of liquid immersion, direct-to-chip, and hybrid cooling methods.
- 5. Data Center Modernization Upgrading legacy systems for efficiency and scalability.

### Market Restraints & Challenges

- High Initial Investment Costs Advanced cooling technologies require significant capital expenditure.
- Complex Maintenance Requirements Managing liquid-based and modular systems demands skilled personnel.
- Energy Supply Constraints Power inefficiency and infrastructure limitations in emerging regions.
- Environmental Concerns Need for eco-friendly refrigerants and reduced greenhouse gas emissions.

## Market Segmentation

# By Component

- Solution (Air Conditioning, Liquid Cooling, Economizers, Others)
- Service (Installation, Maintenance, Consulting)

#### By Type

- · Air-based Cooling
- Liquid-based Cooling
- Hybrid Cooling

## By Data Center Type

- Hyperscale
- Colocation
- Enterprise
- Edge

#### By Region

- North America
- Europe
- Asia-Pacific
- Latin America
- Middle East & Africa

#### Market Trends & Innovations

- 1. Immersion & Liquid Cooling High-efficiency systems for AI and HPC workloads.
- 2. Al-enabled Thermal Management Smart control systems for predictive cooling optimization.
- 3. Free Cooling & Renewable Integration Reduced energy consumption through natural air and water sources.
- 4. Micro & Modular Data Centers Portable, scalable cooling designs for distributed networks.
- 5. Sustainability Initiatives Growing focus on carbon-neutral and green-certified facilities.

#### **Future Outlook**

The global data center cooling market is projected to surpass US\$ 73.4 Bn by 2035, driven by sustainable innovations, high-density computing, and global cloud expansion. As data centers evolve into energy-efficient digital ecosystems, next-generation cooling technologies will be central to achieving operational resilience and environmental compliance.

#### Key future trends include:

- Widespread adoption of liquid and immersion cooling in hyperscale facilities.
- Integration of Al-based monitoring and energy analytics.
- Increased use of renewable-powered cooling systems.
- Expansion of green data centers across emerging economies.

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#### Important FAQs with Answers

- Q1. What was the global data center cooling market size in 2024?
- A1. The market was valued at US\$ 21.2 Bn in 2024.
- Q2. What is the projected market size by 2035?
- A2. The market is expected to reach US\$ 73.4 Bn by 2035.
- Q3. What is the CAGR for 2025–2035?
- A3. The market is estimated to grow at a CAGR of 11.9%.
- Q4. What are the major technologies in this market?
- A4. Air-based cooling, liquid immersion cooling, and AI-driven thermal management.
- Q5. Who are the key players in the industry?
- A5. Schneider Electric, Vertiv, Johnson Controls, Rittal, STULZ, Asetek, and Daikin.
- Q6. What trends will shape the future of the data center cooling industry?
- A6. Al-enabled cooling, sustainability integration, liquid-based systems, and renewable-powered data centers.

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#### Contact Us

Transparency Market Research Inc.
CORPORATE HEADQUARTER DOWNTOWN,
1000 N. West Street,
Suite 1200, Wilmington, Delaware 19801 USA

Tel: +1-518-618-1030

USA - Canada Toll Free: 866-552-3453

Website: https://www.transparencymarketresearch.com

Blog: <a href="https://tmrblog.com">https://tmrblog.com</a>

Email: sales@transparencymarketresearch.com

TMR PVT LTD

Transparency Market Research Inc.

+ +1 518-618-1030

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