

# Data Center Cooling Market to Hit \$40.08B by 2032, Driven by AI & Liquid Cooling | DataM Intelligence

Data Center Cooling Market surges with Al-driven demand, liquid cooling adoption & green innovations, projected to hit \$40.08B by 2032 at 13.64% CAGR.

AUSTIN, TX, UNITED STATES, June 23, 2025 /EINPresswire.com/ -- The <u>Data</u> <u>Center Cooling Market</u> size reached US\$ 14.41 billion in 2024 and is expected to grow impressively to US\$ 40.08 billion by 2032, at a robust CAGR of 13.64% over the forecast period (2025–2032).



This rapid expansion is driven by the surging demand for high-performance computing, artificial intelligence (AI), big data analytics, and cloud services, which are transforming how data centers are designed and operated. With increasing computing power comes an exponential rise in heat generation making efficient cooling a mission-critical concern for hyperscale, colocation, and

## ٢

The Data Center Cooling Market hit US\$14.41B in 2024, set to soar to US\$40.08B by 2032 driven by AI, liquid cooling, and green tech transforming efficiency & sustainability in data centers."

DataM Intelligence

enterprise data centers alike.

To Download Sample Report:

https://datamintelligence.com/download-sample/datacenter-cooling-market

Market Growth Drivers

1. Al and High-Performance Workloads Al applications are placing enormous thermal loads on modern data centers. From machine learning algorithms to GPU-heavy workloads, the heat density has outpaced

the capabilities of traditional cooling systems. This has accelerated demand for innovative cooling solutions that can efficiently handle extreme temperatures while reducing energy

#### usage.

#### 2. Energy and Sustainability Mandates

With energy costs and environmental impact under scrutiny, data center operators are under increasing pressure to improve their Power Usage Effectiveness (PUE) and reduce carbon footprints. Cooling systems can account for 30–40% of a data center's total energy consumption—making them a prime target for efficiency improvements.

3. Liquid Cooling Adoption

Liquid cooling technologies are rapidly moving from niche to mainstream. Direct-to-chip, reardoor heat exchangers, and full immersion cooling are gaining traction for their ability to handle dense workloads with minimal power consumption and reduced reliance on traditional HVAC systems.

4. Rise of Edge and Hyperscale Data Centers

The proliferation of edge computing and the ongoing boom in hyperscale data centers are driving demand for flexible, scalable, and location-optimized cooling solutions—especially as these facilities are often built in regions with varied climates and power constraints.

Market Segmentation:

By Cooling Infrastructure: CRAC Units (Computer Room Air Conditioning), CRAH Units (Computer Room Air Handlers), In-Row Cooling Systems, Cooling Towers, Others.

By Solution Type: Air-Based Cooling, Liquid-Based Cooling.

By Tier Classification: Tier I & II, Tier III, Tier IV.

By Deployment Scale: Hyperscale Data Centers, Colocation Data Centers, Enterprise Data Centers, Edge Data Centers.

By End-user:IT & Telecom, Banking, Financial Services & Insurance (BFSI), Healthcare, Retail & Ecommerce, Government & Defense, Energy, Others.

By Region: North America, South America, Europe, Asia-Pacific, Middle East and Africa.

**Key Players** 

Schneider Electric SE

Vertiv Group

Rittal

Exxon Mobil Corporation

Green Revolution Cooling

Air Enterprises

Asetek, Inc.

Climaveneta Climate Technologies PVT. LTD.

Coolcentric

Mitsubishi Electric Corporation

**Regional Outlook** 

North America

North America continues to lead the global market, driven by significant investments from major cloud providers and technology giants. The United States, in particular, remains the largest market within the region, with massive expansions underway across Virginia, Texas, and emerging tech hubs in the Midwest.

Adoption of advanced cooling systems is particularly high in AI-focused data centers, with operators investing heavily in liquid-based technologies and sustainable solutions to comply with tightening environmental standards.

Asia-Pacific

The Asia-Pacific region is poised to witness the fastest growth, led by countries like China, Japan, India, and Singapore. Rapid digitalization, government-led smart city initiatives, and a booming ecommerce sector are fueling an explosion in data center construction. Japan, in particular, is emerging as a major player due to government support for green data centers and strong investment in next-generation cooling innovations.

#### Europe

Europe is seeing significant market growth, with an increasing number of operators committing to net-zero emissions and green energy usage. Regulatory mandates across the EU are pushing data center firms to invest in highly efficient, low-water, and low-carbon cooling technologies. Latest News in the USA

In the USA, the AI boom is driving unprecedented growth in data center construction, particularly in regions like Northern Virginia, where dense clusters of hyperscale facilities are coming online.

However, this growth has brought new challenges. Communities are raising concerns over increased noise pollution, air emissions from diesel backup generators, and the vast amounts of water used in cooling systems. Some municipalities are exploring stricter regulations to manage these impacts and ensure that environmental sustainability keeps pace with technological progress.

Furthermore, recent analyses have highlighted the growing energy footprint of American data centers, with some projections suggesting they could soon consume as much power as entire small nations. As a result, sustainability, efficiency, and regulatory compliance have become top priorities for operators.

### Latest News in Japan

Japan is emerging as a hotbed of innovation in data center cooling. One of the most exciting developments is the construction of a floating data center off the coast of Yokohama. This project, backed by a consortium of major Japanese corporations, aims to use ocean-based cooling to dramatically reduce energy and water usage representing a potential game-changer in sustainable data center design.

Additionally, major Japanese players like Fujitsu are leading the way in liquid cooling advancements. The company, in collaboration with partners, is rolling out new systems designed to deliver up to 40% improvements in PUE. These efforts align with Japan's national push toward greener data centers and more sustainable IT infrastructure.

Market Trends & Future Outlook

The data center cooling market is entering a dynamic new phase, marked by rapid technological evolution and rising sustainability expectations. Looking ahead, key trends include:

Widespread adoption of liquid cooling for AI-driven workloads

Development of hybrid air/liquid systems for optimized performance

Greater use of renewable energy and waste heat recycling

Innovative designs like floating data centers and modular cooling platforms

Enhanced monitoring and automation powered by AI and IoT to optimize cooling performance in

real time

As demand for digital services continues to soar, the need for efficient, resilient, and sustainable cooling solutions will only intensify propelling this market into its next era of growth.

Looking For A Detailed Full Report? Get it here: <u>https://datamintelligence.com/buy-now-page?report=data-center-cooling-market</u>

Purchase Your Subscription to Power Your Strategy with Precision: <u>https://www.datamintelligence.com/reports-subscription</u>

**Related Reports:** 

Immersion Cooling Market

Concrete Cooling Market

Sai Kumar DataM Intelligence 4market Research LLP +1 877-441-4866 email us here Visit us on social media: LinkedIn X

This press release can be viewed online at: https://www.einpresswire.com/article/824782982

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire<sup>™</sup>, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information. © 1995-2025 Newsmatics Inc. All Right Reserved.