

AI Data Center Liquid Cooling Market - 2026-2035

<https://marketpublishers.com/r/AEDE2BF1ED27EN.html>

Date: June 2026

Pages: 55

Price: US\$ 3,400.00 (Single User License)

ID: AEDE2BF1ED27EN

Abstracts

AI Data Center Liquid Cooling Market reached US\$ 3.39 Billion in 2025 and is expected to reach US\$ 23.23 billion by 2035, growing with a CAGR of 21.21% during the forecast period 2026-2035.

The AI Data Center Liquid Cooling Market emerges as a key focus in DataM Intelligence latest in-depth analysis, where seasoned researchers harness advanced data analytics and strategic foresight to deliver unparalleled market intelligence. This insightful report meticulously explores the competitive landscape, profiling key players and their forward-thinking innovations in product development, pricing strategies, financial metrics, and global expansion initiatives. By uncovering the driving forces, market dynamics, and disruptive trends shaping the future, this research equips industry stakeholders with the actionable insights needed to make informed decisions in an increasingly dynamic and competitive environment.

A AI Data Center Liquid Cooling Market is a data-driven software solution that collects, integrates, analyzes, and visualizes customer data across various touchpoints to generate actionable insights. These platforms help businesses understand customer behaviors, preferences, and purchasing patterns in real time, enabling personalized marketing, enhanced customer engagement, and data-driven decision-making.

By Cooling Technology

Direct-to-Chip Cooling*

Adoption Trends in GPU-Dense AI Racks

Retrofit Potential in Existing Data Centers

Single-Phase Immersion Cooling

Demand in AI, HPC and Research Computing Facilities

Two-Phase Immersion Cooling

Adoption Outlook for Extreme-Density AI Workloads

Rear-Door Heat Exchangers

Role in Hybrid and Transitional Data Center Cooling

Hybrid Air-Liquid Cooling

Use in Brownfield AI Data Center Upgrades

Spray/Jet Cooling

Emerging Applications in Advanced AI Hardware Cooling

By Component

Solutions*

Direct-to-Chip, Immersion and Rack-Level Cooling Solutions

Coolant Distribution Units

CDU Capacity Expansion for AI and HPC Data Centers

Cold Plates

GPU and CPU-Level Heat Removal Applications

Heat Exchangers

Pumps, Valves and Manifolds

Sensors and Leak Detection Systems

Role in Reliability, Uptime and Risk Management

Coolants and Dielectric Fluids

Water-Glycol, Dielectric and Engineered Fluid Analysis

Services

Design, Installation, Commissioning, Maintenance and Consulting
Services

By Data Center Type

Hyperscale AI Data Centers*

AI Cluster Deployment and High-Density Rack Demand

Colocation AI Data Centers

Demand for AI-Ready Multi-Tenant Infrastructure

Enterprise AI Data Centers

Private AI Infrastructure and Enterprise Modernization

Edge AI Data Centers

Liquid Cooling Demand for Distributed AI Inference

HPC and Research Facilities

Supercomputing, Simulation and Scientific Computing Applications

By Workload

Generative AI Training*

Demand from GPU Clusters and Large Language Model Training

AI Inference

Growth of Distributed and Edge AI Inference Workloads

High-Performance Computing

Cloud AI Infrastructure

GPU-as-a-Service and AI Cloud Platform Demand

Semiconductor Design and Simulation

Defense and Research Computing

Enterprise Analytics

By End User

Cloud Service Providers*

Hyperscale AI Cloud and GPU Infrastructure Demand

Colocation Providers

AI-Ready Colocation Capacity and High-Density Customer Demand

Server OEMs

Liquid-Ready Rack and AI Server Integration

Enterprises

Government and Defense

BFSI

Healthcare and Life Sciences

Telecom

Manufacturing

Others

Regional Analysis for AI Data Center Liquid Cooling Market:

North America (U.S., Canada, Mexico)

Europe (U.K., Italy, Germany, Russia, France, Spain, The Netherlands and Rest of Europe)

Asia-Pacific (India, Japan, China, South Korea, Australia, Indonesia Rest of Asia Pacific)

South America (Colombia, Brazil, Argentina, Rest of South America)

Middle East & Africa (Saudi Arabia, U.A.E., South Africa, Rest of Middle East & Africa)

This Report Covers:

Go-to-market Strategy.

Neutral perspective on the market performance.

Development trends, competitive landscape analysis, supply side analysis, demand side analysis, year-on-year growth, competitive benchmarking, vendor identification, and other significant analysis, as well as development status.

Customized regional/country reports as per request and country level analysis.

Potential & niche segments and regions exhibiting promising growth covered.

Analysis of Market Size (historical and forecast), Total Addressable Market (TAM), Serviceable Available Market (SAM), Serviceable Obtainable Market (SOM), Market Growth, Technological Trends, Market Share, Market Dynamics, Competitive Landscape and Major Players (Innovators, Start-ups, Laggard, and Pioneer).

Research Process:

Both primary and secondary data sources have been used in the global AI Data Center Liquid Cooling Market research report. During the research process, a wide range of industry-affecting factors are examined, including governmental regulations, market conditions, competitive levels, historical data, market situation, technological advancements, upcoming developments, in related businesses, as well as market volatility, prospects, potential barriers, and challenges.

Contents

1. METHODOLOGY AND SCOPE

- 1.1. Research Methodology
- 1.2. Research Objective and Scope of the Report
- 1.3. Market Definition and Research Assumptions
- 1.4. Data Sources and Forecasting Model
- 1.5. Base Year, Historical Years and Forecast Period
 - 1.5.1. Historical Years: 2023-2024
 - 1.5.2. Base Year: 2025
 - 1.5.3. Forecast Period: 2026-2035
 - 1.5.4. Available Years: 2023-2035

2. DEFINITION AND OVERVIEW

- 2.1. AI Data Center Liquid Cooling Market Definition
- 2.2. Market Scope and Coverage
- 2.3. Market Inclusions and Exclusions
- 2.4. AI Data Center Liquid Cooling Ecosystem Overview
- 2.5. Evolution from Air Cooling to Liquid Cooling in AI Data Centers

3. EXECUTIVE SUMMARY

- 3.1. Snippet by Cooling Technology
- 3.2. Snippet by Component
- 3.3. Snippet by Data Center Type
- 3.4. Snippet by Workload
- 3.5. Snippet by End User
- 3.6. Snippet by Region
- 3.7. Key Market Takeaways
- 3.8. Market Opportunity Snapshot

4. DYNAMICS

- 4.1. Impacting Factors
 - 4.1.1. Drivers
 - 4.1.1.1. Rising Generative AI, HPC and GPU-Dense Workloads Requiring High-Density Cooling

4.1.1.2. Growing Adoption of Direct-to-Chip and Immersion Cooling in AI-Ready Data Centers

4.1.1.3. Increasing Demand for Energy-Efficient and Sustainable Data Center Infrastructure

4.1.1.4. Expansion of Hyperscale Cloud and AI Colocation Facilities

4.1.1.5. Rising Rack Power Density and Next-Generation AI Accelerator Deployments

4.1.2. Restraints

4.1.2.1. Complexity and Cost of Retrofitting Existing Air-Cooled Data Centers

4.1.2.2. Facility Readiness Challenges for Liquid Cooling Deployment

4.1.2.3. Concerns Related to Fluid Handling, Leak Detection and Maintenance Skills

4.1.2.4. Compatibility Issues Across Servers, CDUs, Coolants and Rack Infrastructure

4.1.3. Opportunities

4.1.3.1. Growing Demand for AI-Ready Colocation Capacity

4.1.3.2. Greenfield AI Data Center Construction and Liquid-Ready Facility Design

4.1.3.3. Cooling-as-a-Service and Managed Liquid Cooling Models

4.1.3.4. Expansion of CDU, Cold Plate and Engineered Coolant Innovation

4.1.3.5. Waste Heat Recovery and Low-Carbon Data Center Design

4.1.4. Trends

4.1.4.1. Shift Toward Rack-Scale Liquid-Cooled AI Infrastructure

4.1.4.2. Integration of AI-Based Thermal Monitoring and DCIM Platforms

4.1.4.3. Growing Partnerships Between Chipmakers, Server OEMs and Cooling Vendors

4.1.4.4. Rising Demand for Modular and Prefabricated Liquid Cooling Infrastructure

4.1.4.5. Adoption of Hybrid Air-Liquid Cooling in Brownfield Facilities

4.2. Impact Analysis

5. INDUSTRY ANALYSIS

5.1. Porter's Five Forces Analysis

5.1.1. Bargaining Power of Suppliers

5.1.2. Bargaining Power of Buyers

5.1.3. Threat of New Entrants

5.1.4. Threat of Substitutes

5.1.5. Competitive Rivalry

5.2. Supply Chain Analysis

5.3. Value Chain Analysis

5.4. Pricing Analysis

- 5.5. Technology Readiness Analysis
- 5.6. Rack Density and Thermal Load Analysis
- 5.7. Regulatory and Compliance Analysis
- 5.8. Sustainability Analysis
- 5.9. PUE, Energy Efficiency and Water Usage Analysis
- 5.10. Patent and Innovation Analysis
- 5.11. Mergers, Acquisitions and Strategic Partnerships Analysis
- 5.12. DMI Opinion

6. BY COOLING TECHNOLOGY

- 6.1. Introduction
 - 6.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology
 - 6.1.2. Market Attractiveness Index, By Cooling Technology
- 6.2. Direct-to-Chip Cooling*
 - 6.2.1. Introduction
 - 6.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.2.3. Adoption Trends in GPU-Dense AI Racks
 - 6.2.4. Retrofit Potential in Existing Data Centers
- 6.3. Single-Phase Immersion Cooling
 - 6.3.1. Introduction
 - 6.3.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.3.3. Demand in AI, HPC and Research Computing Facilities
- 6.4. Two-Phase Immersion Cooling
 - 6.4.1. Introduction
 - 6.4.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.4.3. Adoption Outlook for Extreme-Density AI Workloads
- 6.5. Rear-Door Heat Exchangers
 - 6.5.1. Introduction
 - 6.5.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.5.3. Role in Hybrid and Transitional Data Center Cooling
- 6.6. Hybrid Air-Liquid Cooling
 - 6.6.1. Introduction
 - 6.6.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.6.3. Use in Brownfield AI Data Center Upgrades
- 6.7. Spray/Jet Cooling
 - 6.7.1. Introduction
 - 6.7.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
 - 6.7.3. Emerging Applications in Advanced AI Hardware Cooling

7. BY COMPONENT

7.1. Introduction

7.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component

7.1.2. Market Attractiveness Index, By Component

7.2. Solutions*

7.2.1. Introduction

7.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.2.3. Direct-to-Chip, Immersion and Rack-Level Cooling Solutions

7.3. Coolant Distribution Units

7.3.1. Introduction

7.3.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.3.3. CDU Capacity Expansion for AI and HPC Data Centers

7.4. Cold Plates

7.4.1. Introduction

7.4.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.4.3. GPU and CPU-Level Heat Removal Applications

7.5. Heat Exchangers

7.5.1. Introduction

7.5.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.6. Pumps, Valves and Manifolds

7.6.1. Introduction

7.6.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.7. Sensors and Leak Detection Systems

7.7.1. Introduction

7.7.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.7.3. Role in Reliability, Uptime and Risk Management

7.8. Coolants and Dielectric Fluids

7.8.1. Introduction

7.8.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.8.3. Water-Glycol, Dielectric and Engineered Fluid Analysis

7.9. Services

7.9.1. Introduction

7.9.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

7.9.3. Design, Installation, Commissioning, Maintenance and Consulting Services

8. BY DATA CENTER TYPE

8.1. Introduction

8.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type

8.1.2. Market Attractiveness Index, By Data Center Type

8.2. Hyperscale AI Data Centers*

8.2.1. Introduction

8.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

8.2.3. AI Cluster Deployment and High-Density Rack Demand

8.3. Colocation AI Data Centers

8.3.1. Introduction

8.3.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

8.3.3. Demand for AI-Ready Multi-Tenant Infrastructure

8.4. Enterprise AI Data Centers

8.4.1. Introduction

8.4.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

8.4.3. Private AI Infrastructure and Enterprise Modernization

8.5. Edge AI Data Centers

8.5.1. Introduction

8.5.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

8.5.3. Liquid Cooling Demand for Distributed AI Inference

8.6. HPC and Research Facilities

8.6.1. Introduction

8.6.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

8.6.3. Supercomputing, Simulation and Scientific Computing Applications

9. BY WORKLOAD

9.1. Introduction

9.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload

9.1.2. Market Attractiveness Index, By Workload

9.2. Generative AI Training*

9.2.1. Introduction

9.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.2.3. Demand from GPU Clusters and Large Language Model Training

9.3. AI Inference

9.3.1. Introduction

9.3.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.3.3. Growth of Distributed and Edge AI Inference Workloads

9.4. High-Performance Computing

9.4.1. Introduction

9.4.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.5. Cloud AI Infrastructure

9.5.1. Introduction

9.5.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.5.3. GPU-as-a-Service and AI Cloud Platform Demand

9.6. Semiconductor Design and Simulation

9.6.1. Introduction

9.6.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.7. Defense and Research Computing

9.7.1. Introduction

9.7.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

9.8. Enterprise Analytics

9.8.1. Introduction

9.8.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10. BY END USER

10.1. Introduction

10.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User

10.1.2. Market Attractiveness Index, By End User

10.2. Cloud Service Providers*

10.2.1. Introduction

10.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10.2.3. Hyperscale AI Cloud and GPU Infrastructure Demand

10.3. Colocation Providers

10.3.1. Introduction

10.3.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10.3.3. AI-Ready Colocation Capacity and High-Density Customer Demand

10.4. Server OEMs

10.4.1. Introduction

10.4.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10.4.3. Liquid-Ready Rack and AI Server Integration

10.5. Enterprises

10.5.1. Introduction

10.5.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10.6. Government and Defense

10.6.1. Introduction

10.6.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

10.7. BFSI

- 10.7.1. Introduction
- 10.7.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 10.8. Healthcare and Life Sciences
 - 10.8.1. Introduction
 - 10.8.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 10.9. Telecom
 - 10.9.1. Introduction
 - 10.9.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 10.10. Manufacturing
 - 10.10.1. Introduction
 - 10.10.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 10.11. Others
 - 10.11.1. Introduction
 - 10.11.2. Market Size Analysis and Y-o-Y Growth Analysis (%)

11. BY REGION

- 11.1. Introduction
 - 11.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Region
 - 11.1.2. Market Attractiveness Index, By Region
- 11.2. North America
 - 11.2.1. Introduction
 - 11.2.2. Key Region-Specific Dynamics
 - 11.2.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology
 - 11.2.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component
 - 11.2.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type
 - 11.2.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload
 - 11.2.7. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User
 - 11.2.8. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country
 - 11.2.8.1. U.S.
 - 11.2.8.2. Canada
 - 11.2.8.3. Mexico
- 11.3. Europe
 - 11.3.1. Introduction
 - 11.3.2. Key Region-Specific Dynamics
 - 11.3.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology
 - 11.3.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component
 - 11.3.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type
 - 11.3.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload

- 11.3.7. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User
- 11.3.8. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country
 - 11.3.8.1. Germany
 - 11.3.8.2. UK
 - 11.3.8.3. France
 - 11.3.8.4. Italy
 - 11.3.8.5. Spain
 - 11.3.8.6. Netherlands
 - 11.3.8.7. Nordics
 - 11.3.8.8. Rest of Europe
- 11.4. South America
 - 11.4.1. Introduction
 - 11.4.2. Key Region-Specific Dynamics
 - 11.4.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology
 - 11.4.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component
 - 11.4.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type
 - 11.4.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload
 - 11.4.7. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User
 - 11.4.8. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country
 - 11.4.8.1. Brazil
 - 11.4.8.2. Argentina
 - 11.4.8.3. Chile
 - 11.4.8.4. Colombia
 - 11.4.8.5. Rest of South America
- 11.5. Asia-Pacific
 - 11.5.1. Introduction
 - 11.5.2. Key Region-Specific Dynamics
 - 11.5.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology
 - 11.5.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component
 - 11.5.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type
 - 11.5.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload
 - 11.5.7. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User
 - 11.5.8. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country
 - 11.5.8.1. China
 - 11.5.8.2. India
 - 11.5.8.3. Japan
 - 11.5.8.4. South Korea
 - 11.5.8.5. Australia
 - 11.5.8.6. Singapore

11.5.8.7. Rest of Asia-Pacific

11.6. Middle East and Africa

11.6.1. Introduction

11.6.2. Key Region-Specific Dynamics

11.6.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Cooling Technology

11.6.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Component

11.6.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Data Center Type

11.6.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Workload

11.6.7. Market Size Analysis and Y-o-Y Growth Analysis (%), By End User

11.6.8. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country

11.6.8.1. Saudi Arabia

11.6.8.2. UAE

11.6.8.3. South Africa

11.6.8.4. Rest of Middle East and Africa

12. COMPETITIVE LANDSCAPE

12.1. Competitive Scenario

12.2. Market Positioning/Share Analysis

12.3. Competitive Benchmarking

12.4. Product Portfolio Comparison

12.5. Technology Benchmarking

12.6. Strategic Initiatives

12.7. Mergers and Acquisitions Analysis

12.8. Partnerships, Collaborations and Joint Ventures

12.9. Recent Product Launches and Innovations

13. COMPANY PROFILES

13.1. Schneider Electric SE*

13.1.1. Company Overview

13.1.2. Product Portfolio and Description

13.1.3. Financial Overview

13.1.4. Key Developments

13.1.5. Strategic Focus in AI Data Center Liquid Cooling

13.2. Vertiv Group Corporation

13.2.1. Company Overview

13.2.2. Product Portfolio and Description

13.2.3. Financial Overview

- 13.2.4. Key Developments
- 13.3. Asetek A/S
- 13.4. LiquidStack Inc.
- 13.5. Submer Technologies SL
- 13.6. CoolIT Systems Inc.
- 13.7. Midas Green Technologies LLC
- 13.8. Iceotope Technologies Limited
- 13.9. Chilldyne Inc.
- 13.10. Asperitas BV
- 13.11. Green Revolution Cooling Inc.
- 13.12. Boyd Corporation
- 13.13. Fujitsu Limited
- 13.14. Super Micro Computer, Inc.
- 13.15. NVIDIA Corporation (*LIST NOT EXHAUSTIVE)

14. APPENDIX

- 14.1. About Us and Services
- 14.2. Research Methodology Notes
- 14.3. Abbreviations
- 14.4. Sources and References
- 14.5. Contact Us

I would like to order

Product name: AI Data Center Liquid Cooling Market - 2026-2035

Product link: <https://marketpublishers.com/r/AEDE2BF1ED27EN.html>

Price: US\$ 3,400.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/AEDE2BF1ED27EN.html>