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Global Liquid to Air Coolant Distribution Units (CDU) Supply, Demand and Key Producers, 2026-2032

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Abstracts

The global Liquid to Air Coolant Distribution Units (CDU) market size is expected to reach $ 1476 million by 2032, rising at a market growth of 16.8% CAGR during the forecast period (2026-2032).

Coolant Distribution Unit (CDU) is an essential component in liquid cooling systems that distribute coolant or water evenly throughout the system. The CDU regulates and controls the flow of coolant, maintaining the desired temperature and flow rate. It works in conjunction with pumps, radiators, heat exchangers, and control units to ensure the cooling system runs smoothly and efficiently. The CDU also helps keep the system clean by removing impurities from the coolant, preventing clogging and damage to other components in the system. Overall, the CDU plays a critical role in maintaining the proper functioning of liquid cooling systems. Many facilities are not designed for system-wide liquid cooling, so Liquid to Air CDUs provide the benefits of liquid cooling without the full-scale implementation of facility water.

A Liquid to Air CDU sits between the IT liquid loop and the air-side heat rejection section, so its upstream supply chain is mainly a combination of mechanical, thermal, fluid, and control components. On the downstream side, Liquid to Air Coolant Distribution Units are used in high-density data center liquid cooling deployments, especially for direct-to-chip cold plate loops, rear-door heat exchanger (RDHx) support, and mixed rack cooling architectures in AI/HPC, hyperscale, colocation, and retrofit projects, particularly where fast deployment and limited facility-water modifications are important.

In 2025, global sales of Liquid to Air Coolant Distribution Unit reached approximately 55 K units, with an average global market price of around US$ 8,678/unit. Production

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capacity varies significantly among manufacturers, with gross profit margins ranging from approximately 30% to 50%.

The growth of Liquid to Air Coolant Distribution Units (CDUs) is primarily driven by the increasing demand for deployable, infrastructure-independent liquid cooling systems, particularly within edge computing environments. As distributed data processing nodes proliferate, the need for standalone thermal management solutions that do not rely on centralized chilled water systems becomes more pressing. Liquid to Air CDUs offer a flexible, plug-and-play approach well-suited for compact installations. Additionally, the broader adoption of liquid cooling technologies in high-performance workloads across telecommunications, automation, and energy sectors has expanded the application base for these systems. Furthermore, the global push for carbon neutrality and sustainability is encouraging operators to adopt cooling solutions with higher energy efficiency and lower infrastructural overhead?areas where Liquid to Air CDUs offer significant advantages.

Despite these favorable conditions, there are notable barriers hindering widespread adoption. A key limitation lies in the relatively lower cooling efficiency of air-side heat exchange compared to liquid-to-liquid counterparts, which makes Liquid to Air CDUs less suitable for ultra-high-density thermal loads. Their performance is also constrained in environments with poor ventilation or high ambient temperatures, limiting deployment in certain geographic or architectural conditions. Moreover, the lack of standardization in interface design, control protocols, and system compatibility across vendors poses integration challenges, particularly for operators managing heterogeneous IT environments.

Nevertheless, the rising prominence of modular data centers, AI inference nodes at the edge, and remote unmanned sites creates substantial growth opportunities for Liquid to Air CDUs. Their compact footprint, standalone operation, and ease of integration make them an attractive option for mission-critical deployments in sectors such as energy, transportation, and defense. As technological advancements improve noise suppression, intelligent control, and remote diagnostics capabilities, these units are well-positioned to act as a bridge solution in the broader adoption of liquid cooling, offering a low-barrier, maintenance-friendly cooling strategy for diversified application scenarios.

This report studies the global Liquid to Air Coolant Distribution Units (CDU) production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Liquid to

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Air Coolant Distribution Units (CDU) and provides market size (US$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Liquid to Air Coolant Distribution Units (CDU) that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Liquid to Air Coolant Distribution Units (CDU) total production and demand, 2021-2032, (Units)
Global Liquid to Air Coolant Distribution Units (CDU) total production value, 2021-2032, (USD Million)
Global Liquid to Air Coolant Distribution Units (CDU) production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Units), (based on production site)
Global Liquid to Air Coolant Distribution Units (CDU) consumption by region & country, CAGR, 2021-2032 & (Units)
U.S. VS China: Liquid to Air Coolant Distribution Units (CDU) domestic production, consumption, key domestic manufacturers and share
Global Liquid to Air Coolant Distribution Units (CDU) production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Units)
Global Liquid to Air Coolant Distribution Units (CDU) production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Units)
Global Liquid to Air Coolant Distribution Units (CDU) production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Units)

This report profiles key players in the global Liquid to Air Coolant Distribution Units (CDU) market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Vertiv, Delta Electronics, Envicool, Boyd (Eaton), Nortek DCC, Coolcentric, CoolIT Systems, Kehua Data, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Liquid to Air Coolant Distribution Units (CDU) market

Detailed Segmentation:

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Each section contains quantitative market data including market by value (US$ Millions), volume (production, consumption) & (Units) and average price (US$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Liquid to Air Coolant Distribution Units (CDU) Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Liquid to Air Coolant Distribution Units (CDU) Market, Segmentation by Type:

Rack-based CDU

Row-based CDU

Global Liquid to Air Coolant Distribution Units (CDU) Market, Segmentation by Capacity:

Capacity ? 100kW

Capacity ? 100kW

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Global Liquid to Air Coolant Distribution Units (CDU) Market, Segmentation by Heat Rejection Architecture:

Self-Contained Fan-Coil Type

Ducted Airflow Type

Room-Air Recirculation Type

Other

Global Liquid to Air Coolant Distribution Units (CDU) Market, Segmentation by Application:

Internet

Telecommunications

Finance

Government

Other

Companies Profiled:

Vertiv

Delta Electronics

Envicool

Boyd (Eaton)

Nortek DCC

Coolcentric

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CoolIT Systems

Kehua Data

Key Questions Answered:

1. How big is the global Liquid to Air Coolant Distribution Units (CDU) market?
2. What is the demand of the global Liquid to Air Coolant Distribution Units (CDU) market?
3. What is the year over year growth of the global Liquid to Air Coolant Distribution Units (CDU) market?
4. What is the production and production value of the global Liquid to Air Coolant Distribution Units (CDU) market?
5. Who are the key producers in the global Liquid to Air Coolant Distribution Units (CDU) market?
6. What are the growth factors driving the market demand?

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