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Global Liquid to Air Coolant Distribution Units (CDU) Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Liquid to Air Coolant Distribution Units (CDU) market size was valued at US$ 494 million in 2025 and is forecast to a readjusted size of US$ 1476 million by 2032 with a CAGR of 16.8% during review period.

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.

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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 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 is a detailed and comprehensive analysis for global Liquid to Air Coolant Distribution Units (CDU) market. Both quantitative and qualitative analyses are

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presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Liquid to Air Coolant Distribution Units (CDU) market size and forecasts, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global Liquid to Air Coolant Distribution Units (CDU) market size and forecasts by region and country, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global Liquid to Air Coolant Distribution Units (CDU) market size and forecasts, by Type and by Application, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global Liquid to Air Coolant Distribution Units (CDU) market shares of main players, shipments in revenue ($ Million), sales quantity (Units), and ASP (US$/Unit), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Liquid to Air Coolant Distribution Units (CDU)

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Liquid to Air Coolant Distribution Units (CDU) market based on the following parameters - company overview, sales quantity, revenue, 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

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Data, etc.

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

Market Segmentation

Liquid to Air Coolant Distribution Units (CDU) market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

Rack-based CDU

Row-based CDU

Market segment by Capacity

Capacity ? 100kW

Capacity ? 100kW

Market segment by Heat Rejection Architecture

Self-Contained Fan-Coil Type

Ducted Airflow Type

Room-Air Recirculation Type

Other

Market segment by Application

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Internet

Telecommunications

Finance

Government

Other

Major players covered

Vertiv

Delta Electronics

Envicool

Boyd (Eaton)

Nortek DCC

Coolcentric

CoolIT Systems

Kehua Data

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

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

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Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Liquid to Air Coolant Distribution Units (CDU) product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Liquid to Air Coolant Distribution Units (CDU), with price, sales quantity, revenue, and global market share of Liquid to Air Coolant Distribution Units (CDU) from 2021 to 2026.

Chapter 3, the Liquid to Air Coolant Distribution Units (CDU) competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Liquid to Air Coolant Distribution Units (CDU) breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Type and by Application, with sales market share and growth rate by Type, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026.and Liquid to Air Coolant Distribution Units (CDU) market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Liquid to Air Coolant Distribution Units (CDU).

Chapter 14 and 15, to describe Liquid to Air Coolant Distribution Units (CDU) sales channel, distributors, customers, research findings and conclusion.

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