Global Data Center UPS Market Landscape 2024-2029

Market Report | 2024-10-28 | 180 pages | Arizton Advisory & Intelligence

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Report description:

The global data center UPS market by investment is expected to grow at a CAGR of 10.71% from 2023 to 2029.

KEY TRENDS

Adoption of Advanced UPS Batteries

Advanced battery systems utilized in data centers are crucial to ensure uninterrupted power distribution during power loss. Even the best UPS systems are useless without a battery to buffer the power.
The three main types of batteries segmented in the data center UPS market report are Lithium-Ion, Flywheel, and VRLA (Valve Regulated Lead Acid). For the past few decades, VRLA batteries have been the backbone of the data center industry. However, for many reasons arising now, such as sustainability, safety, durability, and maintenance, among others, many companies have now started to look for sustainable alternatives.
There are many innovative battery technologies available in the market. Lithium-ion batteries are prominent in terms of innovative UPS battery adoption. Besides this, with the help of further research and development, Nickel-zinc and sodium-ion batteries are also entering the data center market.

Adoption of DC UPS Systems to Mitigate Loss of Power

Data centers around the world consume about 1.5% of the global power produced annually, which is quite colossal! They can mitigate power wastage by using energy-efficient power infrastructure, moving to free cooling technology, improving server utilization through virtualization, and removing comatose servers.
Although most industrial applications are based on AC power, there is a growing paradigm shift, where an increasing number of data center operators are considering implementing DC power for power distribution within said facilities. Some energy is lost when power is switched between AC and DC in data centers. Fewer conversions will ensure less heat being lost, resulting in lower OPEX. DC power also takes up less space in a data center and is easier to integrate with other energy devices that generate DC

power.
Most colocation providers globally are involved in the designing of OCP-ready data centers. These data centers are likely to include the deployment of DC power systems. Many enterprises also consider shifting to the data center design of hyperscale operators to reduce OPEX and improve operational efficiency. In terms of power wastage, UPS vendors are investing in R&D activities to mitigate power wastage.

Software-Defined Power & Data Center Infrastructure Automation

A major concern among data center operators these days is the inevitable increasing power consumption trend and wastage by various infrastructures. In addition, data center infrastructure requires regular monitoring and management to function effectively. These operators are seeking assistance via automation and monitoring solutions to reduce the need for human interference, with remote monitoring systems highlighting a maintenance requirement or detecting a failure during the regular testing process.
A reduction in power consumption and wastage in modern data centers is achieved through end-to-end monitoring and automation of facilities. The adoption of Artificial Intelligence (AI) technology is significant in various industries, including data centers. Moreover, the use of AI and machine learning to manage data centers has gained increased importance and attention among operators owing to the increase in power consumption and carbon emissions by data center operators.

SEGMENTATION INSIGHTS

-It is anticipated that the lithium-ion data center battery market will account for a share of 35% to 40% by 2024 in the global data center UPS market. Modern UPS systems are transformed to adopt a modular design and use less space inside facilities to meet changing needs. Predicted trends include a significant increase in data generation and storage, decreased downtime tolerance, and a growing focus on sustainability.
-The data center UPS industry for Tier IV facilities, primarily constructed by hyperscale tech giants, such as Apple, Meta, Microsoft, Amazon Web Services (AWS), and Google, is expected to expand further during the forecast period due to significant investments being made by these providers. These facilities are known for their high revenue generation and emphasis on advanced UPS systems to ensure enhanced efficiency.
Segmentation by UPS Battery Technology
-Lithium-Ion
-Flywheel
-VRLA

Segmentation by UPS Systems
-<=500 kVA
-500-1,000 kVA
->1,000 kVA

Segmentation by Tier Standards
-Tier I & II
-Tier III
-Tier IV

GEOGRAPHICAL ANALYSIS

-In the Americas region, North America leads the data center UPS industry, followed by Latin America. The North American data center industry is considered the most developed and established data center market across the globe and has set a high

benchmark to follow for other regions such as Europe and APAC. Latin America on the other hand, is an emerging and developing data center industry with a lot of potential to be discovered during the forecast period. This potential will drive up the data center UPS market.

-Europe is comprised of many established markets, like the UK, France, Germany, Ireland, and the Netherlands. The region is also witnessing a potential boom across other markets, such as Spain, Italy, Belgium, Poland, Denmark, Sweden, and other countries. The development of data center facilities in these countries will lead to a non-negotiable desire for more redundant and sophisticated UPS systems, automatically boosting the data center UPS market growth.

-This Middle East and Africa has promising potential, quite untapped in certain markets, for growth in terms of data center development as well as for the adoption of sophisticated UPS infrastructure. Markets here experience a lot of power outages and lower redundancy at times. Data center operators here are focused on installing highly redundant UPS systems and other power-related infrastructure to curtail downtime to the very least.

Segmentation by Geography

-North America
oThe U.S.
oCanada
-Latin America
oBrazil
oMexico
oChile
oColombia
oRest of Latin America
-Western Europe
oThe U.K.
oGermany
oFrance
oNetherlands
oIreland
oSwitzerland
oItaly
oSpain
oBelgium
oOther Western European Countries
-Nordics
oDenmark
oSweden
oNorway
oFinland & Iceland
-Central & Eastern Europe
oRussia
oPoland
oOther Central & Eastern European Countries
-Middle East
oUAE
oSaudi Arabia
oIsrael

o Other Middle Eastern Countries
- Africa
o South Africa
o Kenya
o Nigeria
o Other African countries
- APAC
o China
o Hong Kong
o Australia
o New Zealand
o India
o Japan
o South Korea
o Taiwan
o Rest of APAC
- Southeast Asia
o Singapore
o Indonesia
o Malaysia
o Thailand
o Philippines
o Vietnam
o Other Southeast Asian Countries

VENDOR LANDSCAPE

- Prominent UPS system vendors include ABB, Eaton, Vertiv, Legrand, Piller Power Systems, Mitsubishi Electric, Schneider Electric, and Delta Electronics, among others, that are currently dominating the global data center UPS market in terms of their product offerings, quality, and widespread availability across many key geographical locations. Other vendors that are emerging and have much room for growth in the global data center UPS market include Canovate, Rittal, Cyber Power Systems, and Thycon, among many others.
- Battery providers are an integral part of this analysis, considering UPS systems' crucial component is a powerful battery, without which it cannot function the way it ought to. Any UPS system will consist of at least one string of batteries, if not more, depending on the system's DC voltage. They prove to be a lifesaver in situations when the main power source fails to supply power. Battery-providing companies that have a strong presence in the data center UPS market across the globe include Enersys, Exide Technologies, Haze Battery, UNIPOWER, Power-Sonic, and ZAF Energy Systems, among others.

VENDORS LANDSCAPE

Key Vendors

- ABB
- Eaton
- Schneider Electric
- Vertiv
- Piller Power Systems

Other Prominent Vendors

- AEG Power Solutions
- AMETEK Powervar
- Borri
- Canovate
- CENTIEL
- Cyber Power Systems
- Delta Electronics
- Enconnex
- EverExceed
- Exponential Power
- Fuji Electric
- Hewlett Packard Enterprise (HPE)
- Hitachi Hi-Rel Power Electronics
- HITEC Power Protection
- HITZINGER Electric Power
- Huawei Technologies
- Kehua Data (Kehua Tech)
- Kohler
- Legrand
- Marathon Power
- Mitsubishi Electric
- Natron Energy
- Panduit
- Rittal
- Riello Elettronica Group
- Shenzhen KSTAR Science and Technology (KSTAR)
- Socomec
- SolarEdge Technologies
- Thycon
- Toshiba
- Trystar
- VYCON
- ZincFive

Prominent Battery Providers

- EnerSys
- Exide Technologies
- FIAMM Energy Technology
- Haze Battery
- HBL Power Systems
- Power-Sonic
- UNIPOWER
- Saft

-Vision Group (Shenzhen Center Power Tech)
-ZAF Energy Systems

KEY QUESTIONS ANSWERED:

1.How big is the global data center UPS market?
2.Which region holds the most significant global data center UPS market share?
3.What is the growth rate of the data center UPS market?

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