

Hyperscale Data Center Market in APAC- Industry Outlook and Forecast 2020-2025

<https://marketpublishers.com/r/H17FDB7B835CEN.html>

Date: November 2020

Pages: 343

Price: US\$ 3,995.00 (Single User License)

ID: H17FDB7B835CEN

Abstracts

In-depth Analysis and Data-driven Insights on the Impact of COVID-19 Included in this APAC Hyperscale Data Center Market Report

The APAC hyperscale data center market by revenue is expected to grow at a CAGR of close to 4% during the period 2020–2025.

The market is witnessing steady growth with continued investments from colocation and cloud service providers. Continued investments from colocation and cloud service providers such as AWS, Microsoft, Google, and Alibaba are major hyperscale data center trends that will drive the industry growth. China and India are the sought-after markets for hyperscale data center facilities because of the growing demand for telecommunication, cloud, and internet services. Apple's announcement about the construction of new facilities in China in partnership with regional service providers is likely to increase the market growth significantly. The adoption of artificial intelligence-based and robot monitoring solutions is gaining traction in the market. A majority of procured power and cooling infrastructure is being offered with in-built control systems. The integration of systems on a single dashboard that facilitates real-time monitoring is growing among data center operators.

The following factors are likely to contribute to the growth of the APAC hyperscale data center market during the forecast period:

High Procurement of Renewable Energy Sources for Data Center Facilities

Software-defined Optimization for Power and Energy Sources

AI Boosts Liquid Immersion & Direct-to-Chip Cooling Adoption

Rising Deployment of Software-Defined Data Center Facilities

The study considers the present scenario of the APAC hyperscale data center market and its market dynamics for the period 2019-2025. It covers a detailed overview of several market growth enablers, restraints, and trends. The report offers both the demand and supply aspect of the market. It profiles and examines leading companies and other prominent ones operating in the market.

APAC Hyperscale Data Center Market Segmentation

This research report includes a detailed segmentation by IT infrastructure, electrical infrastructure, mechanical infrastructure, cooling systems, general construction, and geography. The IT hyperscale data center market in China & Hong Kong is expected to reach over \$11 billion in 2025. Servers are likely to account for most of the market revenue, followed by storage and network infrastructure. Hyperscale operators are adopting OCP-designed open infrastructure solutions. These products are increasingly gaining traction among enterprises. Most enterprises are currently procuring infrastructure that best suits their business computing requirements, such as mission-critical and high-performance infrastructure solutions. In terms of storage, hyperscale data center operators are the major adopters of all-flash and hybrid storage infrastructure. The emergence of 200G and 400G ports in data center interconnects will witness a significant uptake among hyperscale cloud data center operators. Hyperscale operators are the predominant users of virtualization and docker container technology solutions.

The procurement of lithium-ion UPS systems will continue to grow among hyperscale data center operators to reduce the OPEX. Vendors are continually coming up with innovative UPS solutions to increase efficiency and reduce cost. In terms of capacity, the use of over 1,000 kVA systems is expected to grow among data center facilities using traditional architecture.

The data center generator market share is expected to grow due to the continuous construction of hyperscale facilities across the globe. A single hyperscale service provider requires over 15 generators to provide uninterrupted power backup. The adoption of Diesel Rotary Uninterruptible Power Supply (DRUPS) systems is also growing as they combine both battery and flywheel UPS topology and a diesel

generator to provide backup power during outages.

Most hyperscale data center facilities in China are adopting water-based cooling techniques for cooling servers. A few cities in China facilitate free cooling for up to 5,000 hours per year. However, the construction of facilities in Northern China would require stronger fiber connectivity than the rest of the country. Anti-pollution measures by the Government of China will reduce air pollutants and enable data center operators to benefit from free cooling solutions. Several facilities in Australia and New Zealand are designed to cool servers through water-based cooling techniques. The growing construction of data center facilities will aid in developing facilities that comprise multiple chillers, cooling towers, and CRAH units in N+N redundant configuration. Data center facilities are designed with hot/cold aisle containment systems and equipped with a rack size of 42U. 45U?48U rack units are expected to witness growth during the forecast period. In New Zealand, climatic conditions are beneficial for the data center cooling market, leading to the country's adoption of free cooling. As Japan supports free cooling, the use of air-cooled chillers with N+1 redundancy, CRAH units with N+1 redundancy, and operate at a PUE of 1.40 is expected to grow.

While most hyperscale projects in China & Hong Kong are designed to be Tier III and Tier IV standards, several facilities are designed to be Tier III standards with flexible design. Australia is witnessing increased construction of greenfield projects with modular designs adopted to facilitate flexible customer needs. The Indian data center market highly depends on infrastructure providers for installation and commissioning services and small-scale engineering firms and data center operators. Some infrastructure providers carry out end-to-end development of data center facilities. One of the major factors impacting India's market growth is the availability of the economical labor cost than the US and the UK. The country has a strong, skilled workforce to carry out design, construction, installation, and commissioning services. In terms of general construction, the market witnessed increased construction of facilities in Japan. The cost of developing data center facilities is high, along with the procurement of land.

IT Infrastructure

Servers

Storage

Network Devices

Electrical Infrastructure

UPS Systems

Generators

PDU's

Transfer Switches & Switchgears

Other Electrical Infrastructure

Mechanical Infrastructure

Cooling Systems

Racks

Other Mechanical Infrastructure

Cooling Systems

CRAC & CRAH

Chiller Units

Cooling Towers & Dry Coolers

Economizers & Evaporative Coolers

Other Cooling Units

General Construction

Building Development

Installation & Commissioning Services

Building Design

Physical Security

DCIM

Insights by Geography

China and Hong Kong region is expected to observe a revenue share of over \$15 billion by 2025. The region is the leader in hyperscale data center operations. The demand in China & Hong Kong is likely to surpass supply due to the increasing demand for cloud-based services, big data analytics, and IoT. In China, the IoT market was valued at \$200 billion by 2020, prompting operators to consider the deployment of multiple hyperscale facilities and edge locations. The Chinese government has set a goal to enable more than 1.7 billion public machine-to-machine connections by 2020. This is likely to boost wholesale colocation facilities and prompt regional cloud service providers to establish multiple availability zones across the country as the demand for hybrid infrastructure services is likely to increase.

By Geography

APAC

China & Hong Kong

Australia & New Zealand

India

Japan

Southeast Asia

Rest of APAC

Insights by Vendors

Increased hyperscale data center construction investments are driven by competition

among cloud service providers to establish multiple cloud regions and increase the customer base for service offerings. Also, colocation providers are investing significantly in hyperscale development, which intensifies competition among themselves and several new market entrants. The market for infrastructure data center suppliers is becoming competitive YOY. Infrastructure suppliers are continuously innovating their product portfolio to increase their market shares.

Prominent IT Infrastructure Providers

Arista

Atos

Broadcom

Cisco

Dell Technologies

Extreme Networks

Hewlett Packard Enterprises (HPE)

Hitachi Vantara

Huawei

IBM

Inspur Group

Inventec

Juniper

Lenovo

NEC

NetApp

Oracle

Pure Storage

Quanta Cloud Technology (Quanta Computer)

Super Micro Computer

Wistron Corporation (Wiwynn)

Prominent Support Infrastructure Providers

ABB

Alfa Laval

Airedale

Asetek

Bosch Security Systems (Robert Bosch)

Caterpillar

Cummins

Condair Group

Delta Group

Eaton

Euro-Diesel (KINOLT)

Green Revolution Cooling (GRC)

Hitech Power Protection

KOHLER (SDMO)

Legrand

Nlyte Software

Nortek Air Solutions

Mitsubishi Electric Corporation

MTU On Site Energy (Rolls-Royce Power Systems AG)

Piller Power Systems

Rittal

Schneider Electric

STULZ

Trane (Ingersoll Rand)

Vertiv

Prominent Construction Contractors

AECOM

Arup Group

Aurecon Construction

CSF Group

DSCO Group

Faithful+Gould

Fortis Construction

Gammon Construction

Larsen & Toubro (L&T)

NTT FACILITIES

PM Group

ISG

Sato Kogyo

Sterling and Wilson (Shapoorji Pallonji Group)

Studio One Design Limited

AirTrunk Operating

Apple

Amazon Web Services (AWS)

Bridge Data Centers

Chindata

CtrlS

Digital Realty

Equinix

Facebook

GDS Holdings

Google

Global Switch

Microsoft

NTT Communications

Shanghai Athub

Shanghai Qnet Networking Technology (Qnet Shanghai)

ST Telemedia Global Data Centres (STT GDC)

Tencent Holdings Ltd.

Tenglong Holdings Group (Tamron)

New Data Center Investors

BDx (Big Data Exchange)

Chayora

Regal Orion

Space DC

Yotta Infrastructure Solutions

Key Questions Answered :

What is the APAC Hyperscale data center market size and growth rate during the forecast period?

What are the factors impacting the growth of the APAC Hyperscale data center market share?

What is the growth of the China & Hong Kong hyperscale data center market during the forecast period?

Who are the leading hyperscale data center companies in the APAC market?

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