+357 96 030922
info@marketpublishers.com

Indoor Distributed Antenna System (DAS) Market in Asia-Pacific: Focus on Applications and Products Within Indoor DAS in Asia-Pacific - Analysis and Forecast, 2024-2033

https://marketpublishers.com/r/I96678DED6B4EN.html
Date: February 2025
Pages: 0
Price: US$ 4,650.00 (Single User License)
ID: I96678DED6B4EN

Abstracts

Hard copy option is available on any of the options above at an additional charge of $500. Please email us at order@marketpublishers.com with your request.

This report will be delivered in 7-10 working days.Indoor Distributed Antenna System (DAS) Market in Asia-Pacific Overview

The indoor distributed antenna system (DAS) market in the Asia-Pacific region has been experiencing significant growth, driven by the rising demand for seamless wireless connectivity, the expansion of smart city initiatives, and the rapid adoption of 5G-ready infrastructure. The market was valued at $2.47 billion in 2023 and is projected to reach $6.46 billion by 2033, growing at a CAGR of 10.09% under a realistic scenario. In an optimistic scenario, with accelerated 5G rollouts and increased integration of DAS with Wi-Fi 6 and private LTE networks, the market could reach $9.70 billion by 2033 with a CAGR of 15.16%. The major growth sectors include commercial buildings, transportation hubs, healthcare facilities, educational institutions, and sports venues, with hardware and service-based solutions contributing significantly. However, the industry faces challenges such as regulatory approvals, infrastructure deployment costs, and the need for advanced RF planning for effective DAS integration.

Introduction of Indoor Distributed Antenna System (DAS)

An indoor distributed antenna system (DAS) is a network of spatially separated antenna nodes connected to a common source designed to enhance wireless signal distribution within buildings. It plays a crucial role in addressing indoor connectivity challenges by

+357 96 030922
info@marketpublishers.com

ensuring seamless mobile coverage, improving signal strength, and enabling high-speed data transmission. Indoor DAS solutions integrate key components such as amplifiers, antennas, and base stations to optimize coverage in high-density environments, including commercial complexes, stadiums, hospitals, and transportation hubs. The technology is particularly vital in supporting modern connectivity demands, including 5G, IoT, and smart building applications, by reducing network congestion and enhancing reliability. With the growing need for robust wireless networks, Indoor DAS is increasingly adopted across industries, offering scalable and efficient solutions to meet evolving digital requirements.

Market Introduction

The indoor distributed antenna system (DAS) market in Asia-Pacific is undergoing rapid transformation, driven by the increasing demand for seamless indoor connectivity, the expansion of urban infrastructure, and the adoption of 5G networks. The market is currently fueled by the need to enhance wireless coverage in commercial buildings, airports, hospitals, and transportation hubs as mobile network operators and enterprises seek robust connectivity solutions. Governments and telecom operators are investing in DAS to bridge network gaps caused by high-density environments and structural obstructions. Countries such as Japan, South Korea, and Australia have been leading the adoption with advanced 5G rollouts, while emerging markets such as India, Thailand, and Vietnam are experiencing growing demand due to rapid urbanization and the digitization of services. Future growth will be driven by technological advancements, integration with smart city initiatives, and the proliferation of private LTE and Wi-Fi 6 solutions.

Industrial Impact

The industrial impact of the indoor distributed antenna system (DAS) market in the Asia-Pacific region is profound, influencing multiple sectors, including commercial real estate, transportation, healthcare, education, manufacturing, and retail. With the rapid growth of 5G adoption, industries have been leveraging DAS to enhance connectivity, optimize operations, and improve customer experience. In the commercial sector, major shopping malls and office buildings have been integrating DAS solutions to ensure seamless mobile coverage, attracting businesses and consumers. The transportation sector benefits significantly, with airports and metro stations deploying DAS to support high-density passenger areas and IoT applications. Healthcare facilities are using DAS for telemedicine, remote monitoring, and secure patient data transmission, while educational institutions integrate it to enhance e-learning and smart campus initiatives.

+357 96 030922
info@marketpublishers.com

The manufacturing industry, particularly in industrial zones and logistics hubs, is utilizing DAS to support automation, IoT-driven processes, and smart factory operations. Moreover, hospitality businesses, including hotels and resorts, are implementing DAS to provide uninterrupted connectivity for guests, further driving digital transformation in the region. These industry-wide applications, coupled with government initiatives for smart cities and digitalization, are expected to significantly accelerate the demand for DAS solutions in the coming years.

Market Segmentation:

Segmentation 1: by Application Type

- Commercial Buildings
- Hospitality
- Government
- Healthcare
- Educational Institutes
- Manufacturing and Warehouses
- Transportation
- Sports Venues
- Residentials

Commercial Buildings Segment to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Application)

The commercial buildings segment leads the market due to the increasing demand for uninterrupted wireless connectivity in corporate offices, shopping malls, and retail centers. DAS solutions ensure seamless indoor coverage as businesses rely heavily on mobile connectivity for operations, customer engagement, and digital payments. The rise of smart buildings and IoT integration is further driving the adoption of DAS in

+357 96 030922
info@marketpublishers.com

commercial spaces, making it the fastest-growing and most revenue-generating segment.

Segmentation 2: by Solution Type

Hardware

o Antenna Node/Radio Node

o Donor Antenna

o Bidirectional Amplifiers

o Radio Units

o Head-End Units

o Others

Services

o Installation Services

o Other Support Services

Hardware to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Solution)

Hardware components, including antenna nodes, bidirectional amplifiers, and radio units, dominate the DAS market as they form the core infrastructure for signal distribution. The shift toward fiber-based and 5G-ready DAS solutions is fueling demand for advanced hardware capable of handling higher frequencies and increased data traffic. Moreover, the expansion of high-rise commercial and residential buildings necessitates the deployment of robust DAS hardware to mitigate network coverage gaps.

Segmentation 3: by Business Model

+357 96 030922
info@marketpublishers.com

Carrier Model

Enterprise Model

Neutral Host Model

Neutral Host Model to have the Highest Growth Rate in the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Business Model)

The neutral host model is gaining traction as it allows multiple mobile network operators (MNOs) to share DAS infrastructure, reducing costs and improving network efficiency. This model is particularly popular in large venues such as airports, stadiums, and metro stations, where independent deployments by multiple MNOs would be costly and inefficient. Governments in Asia-Pacific are promoting shared infrastructure models to accelerate DAS adoption and enhance network accessibility in high-density areas.

Segmentation 4: by Signal Source

Off-Air Antennas

Base-Transceiver Station (BTS)

Small Cells

Base-Transceiver Station (BTS) to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Signal Source)

Among signal sources, base-transceiver stations (BTS) lead the market as they provide dedicated and high-capacity signal sources for DAS networks. Unlike off-air antennas, which depend on external signals, BTS-based DAS ensures stronger, more reliable connectivity in large facilities such as corporate hubs and hospitals. The growing demand for private LTE and 5G networks has further accelerated the deployment of BTS-integrated DAS solutions.

Segmentation 5: by Distribution System Type

Active DAS

+357 96 030922
info@marketpublishers.com

Passive DAS

Hybrid DAS

Hybrid DAS to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Distribution System)

In the Asia-Pacific indoor DAS market, hybrid distribution systems are dominant due to their ability to balance performance, scalability, and affordability by combining active and passive components. This makes them ideal for diverse applications, from commercial buildings to transportation hubs, with varying coverage and capacity needs. Their support for advanced technologies like 5G and adaptability to existing infrastructure further strengthens their appeal. Driven by the need for cost-effective, efficient solutions capable of addressing both coverage and capacity challenges, especially in 5G deployments, and the growing adoption of mixed-use infrastructure, hybrid systems are experiencing accelerated growth and market leadership.

Segmentation 6: by User Facility Type

>500K sq. ft.

200K-500K sq. ft.

500K sq. ft. to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Facility Type)

Large-scale venues such as airports, convention centers, stadiums, and shopping malls are the primary adopters of DAS solutions, making facilities over 500,000 sq. ft. the leading segment. These locations experience high foot traffic, heavy mobile data usage, and demand for uninterrupted connectivity, necessitating robust DAS deployments. The hospitality and tourism boom in Asia-Pacific and smart infrastructure initiatives are further propelling growth in this segment.

Segmentation 7: by Country

Indonesia

+357 96 030922
info@marketpublishers.com

Japan

Philippines

Malaysia

Australia

Vietnam

Taiwan

Thailand

Rest-of-Asia-Pacific (Excluding China)

Japan to Dominate the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific (by Country)

Japan is the leading country in the indoor distributed antenna system (DAS) market in the Asia-Pacific region. Japan's leadership is attributed to its advanced regulatory frameworks, early adoption of 5G technologies, and strong collaboration between public and private entities. Companies such as JTOWER are driving innovations in the market, notably through 5G infrastructure-sharing deployments at high-traffic venues such as airports. Japan's focus on smart city initiatives and efficient spectrum utilization, combined with significant investments in shared infrastructure, ensures the country remains at the forefront of DAS market development.

Recent Developments in the Indoor Distributed Antenna System (DAS) Market in Asia-Pacific

On October 17, 2024, Frog Cellsat introduced its 5G active DAS solution, smart mini boosters, and VHF repeaters at the India Mobile Congress. These technologies are designed to boost connectivity at major venues, such as airports and metro systems, underscoring the shift toward 5G-ready DAS solutions to meet the increasing demand for high-capacity networks and be-distributed antenna system innovation.

NEC Corporation announced a breakthrough in radio-over-fiber technology on June 17, 2024, introducing a 1-bit fiber transmission

+357 96 030922
info@marketpublishers.com

method. This innovation will facilitate cost-effective millimeter-wave communication networks, essential for Beyond 5G/6G applications in high-density indoor environments such as high-rise buildings and factories.

Wilson Connectivity revealed its Private 5G solution, integrating hybrid DAS with active distributed antenna systems at the Mobile World Congress in 2024. This solution is tailored to support both public and private 5G networks, enhancing indoor coverage while addressing the growing demand for scalable, secure wireless infrastructure in Asia-Pacific's emerging smart cities.

Demand - Drivers, Limitations, and Opportunities

Market Demand Drivers: Expansion of 5G Networks

The implementation of 5G networks in Indonesia is a key driver of the indoor DAS industry. 5G technology provides faster communication rates and supports more connected devices, but its higher frequency signals have limited penetration capabilities, particularly inside. To solve this difficulty, interior DAS installations are required to extend 5G coverage within buildings, allowing users to enjoy the benefits of 5G connectivity fully. This necessity has been driving investment in indoor DAS infrastructure across the country. For instance, in September 2024, Telkomsel, a pioneer in 5G connectivity in Indonesia, announced its plan to significantly expand its Hyper 5G network in the country, beginning with Denpasar and Badung in Bali. This plan is a broader part of the company’s spectrum to expand its 5G coverage across Indonesia.

Market Challenges: Technical Complexity in Diverse Building Environments

The country's unique architectural landscape complicates indoor DAS deployments in Indonesia. Buildings differ greatly in design, construction materials, and layout, affecting signal propagation and necessitating site-specific solutions. For instance, current high-rise constructions of energy-efficient materials can block signal penetration, necessitating specialized engineering to ensure optimal coverage. Creating specialized DAS systems for such diverse contexts necessitates extensive technical knowledge and resources, complicating deployment efforts.

Market Opportunities: Growing Demand for Reliable and High-Speed Wireless

+357 96 030922
info@marketpublishers.com

Communication in Urban and Commercial Areas

Singapore's high smartphone penetration and increased use of data-intensive applications have fueled demand for seamless indoor connectivity. Indoor DAS improves signal strength within buildings, ensuring continuous mobile services in situations where standard signals may fail. This is especially important in urban areas with dense infrastructures, where regular communication is essential for both personal and professional activity. Moreover, the country was one of the first to launch 5G services in 2021. Singtel is Singapore's major service provider. It competes with Starhub and M1, the other major operators in the country. Both StarHub and M1 provide 5G services throughout the country. Earlier this year, in 2024, StarHub announced 99% penetration of their outdoor 5G network. By July 2024, all three telcos intend to phase out 3G services to free up spectrum for 5G expansion. Also, according to the Infocomm Media Development Authority (IMDA), Singapore had 18,64,800 5G customers by the end of December 2023. Singtel claimed to have more than 1 million 5G clients by the end of September 2023.

How can this report add value to an organization?

This report adds value to an organization by providing comprehensive insights into the evolving DAS market, enabling data-driven decision-making and strategic planning for growth. It highlights key market trends, technological advancements, and competitive dynamics, helping businesses identify emerging opportunities in sectors such as commercial buildings, healthcare, transportation, and smart cities. The report’s detailed segmentation by application type, solution type, business model, signal source, and distribution system type allows organizations to target specific markets, optimize their offerings, and improve business strategies. Additionally, its coverage of government policies, regulatory frameworks, and sustainability initiatives ensures companies remain compliant with the evolving landscape of DAS infrastructure. By leveraging this report, organizations can make informed investment decisions in DAS technology, enhance their operational efficiency, and gain a competitive edge in the rapidly expanding indoor wireless connectivity sector, ensuring long-term growth and leadership in the market.

Research Methodology

Factors for Data Prediction and Modelling

+357 96 030922
info@marketpublishers.com

The base currency considered for the market analysis is US$. Currencies other than the US$ have been converted to the US$ for all statistical calculations, considering the average conversion rate for that particular year.

The currency conversion rate was taken from the historical exchange rate on the Oanda website.

Nearly all the recent developments from January 2021 to November 2024 have been considered in this research study.

The information rendered in the report is a result of in-depth primary interviews, surveys, and secondary analysis.

Where relevant information was not available, proxy indicators and extrapolation were employed.

Any economic downturn in the future has not been taken into consideration for the market estimation and forecast.

Technologies currently used are expected to persist through the forecast with no major technological breakthroughs.

Market Estimation and Forecast

This research study involves the usage of extensive secondary sources, such as certified publications, articles from recognized authors, white papers, annual reports of companies, directories, and major databases to collect useful and effective information for an extensive, technical, market-oriented, and commercial study of the indoor distributed antenna system (DAS) market in Asia-Pacific.

The market engineering process involves the calculation of the market statistics, market size estimation, market forecast, market crackdown, and data triangulation (the methodology for such quantitative data processes is explained in further sections). The primary research study has been undertaken to gather information and validate the market numbers for segmentation types and industry trends of the key players in the market.

Primary Research

+357 96 030922
info@marketpublishers.com

The primary sources involve industry experts from the indoor distributed antenna system (DAS) market in Asia-Pacific and various stakeholders in the ecosystem. Respondents such as CEOs, vice presidents, marketing directors, and technology and innovation directors have been interviewed to obtain and verify both qualitative and quantitative aspects of this research study.

The key data points taken from primary sources include:

validation and triangulation of all the numbers and graphs

validation of reports segmentation and key qualitative findings

understanding the competitive landscape

validation of the numbers of various markets for market type

percentage split of individual markets for geographical analysis

Secondary Research

This research study involves the usage of extensive secondary research, directories, company websites, and annual reports. It also makes use of databases, such as Hoovers, Bloomberg, Businessweek, and Factiva, to collect useful and effective information for an extensive, technical, market-oriented, and commercial study of the global market. In addition to the data sources, the study has been undertaken with the help of other data sources and websites, such as the Census Bureau, OICA, and ACEA.

Secondary research was done to obtain crucial information about the industry's value chain, revenue models, the market's monetary chain, the total pool of key players, and the current and potential use cases and applications.

The key data points taken from secondary research include:

segmentations and percentage shares

data for market value

key industry trends of the top players of the market

qualitative insights into various aspects of the market, key trends, and

+357 96 030922
info@marketpublishers.com

emerging areas of innovation

quantitative data for mathematical and statistical calculations

Key Market Players and Competition Synopsis

The companies that are profiled in the indoor distributed antenna system (DAS) market in Asia-Pacific have been selected based on inputs gathered from primary experts who have analyzed company coverage, product portfolio, and market penetration.

Some of the prominent names in this market are:

AT&T

Telefonaktiebolaget LM Ericsson

CELONA INC.

Boingo Wireless, Inc.

Alpha Wireless

Philtower Consortium Inc.

ATC TRS V LLC

Colt Technology Services Group Limited

CommScope Holding Company

EDOTCO Group Sdn Bhd

BAI Communications

Field Smart Farms

JTOWER Inc.

MCA Communications, Inc.

+357 96 030922
info@marketpublishers.com

BTI Wireless

Companies not part of the aforementioned pool have been well represented across different sections of the report (wherever applicable).

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

2 ASIA-PACIFIC INDOOR DISTRIBUTED ANTENNA SYSTEM (DAS) MARKET (BY APPLICATION)

+357 96 030922
info@marketpublishers.com

3 ASIA-PACIFIC INDOOR DISTRIBUTED ANTENNA SYSTEM (DAS) MARKET (BY PRODUCTS)

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Indoor Distributed Antenna System (DAS) Market in Asia-Pacific: Focus on Applications and Products Within Indoor DAS in Asia-Pacific - Analysis and Forecast, 2024-2033

Product link: https://marketpublishers.com/r/I96678DED6B4EN.html

Price: US$ 4,650.00 (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/I96678DED6B4EN.html