

mmWave 5G Market to Reach USD 9.34 Billion by 2033, Driven by Expanding Smart Cities and IoT Growth

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/EINPresswire.com/ -- The latest report titled Global MmWave 5G Market contains an in-depth analysis of the fundamental parameters contributing to the global MmWave 5G market scenario. This research report offers readers an in-depth interpretation of the dynamics of the MmWave 5G market, including key drivers, opportunities, threats, and challenges.



The report also briefly discusses key business strategies, supply-demand ratios, key regions, prominent market players, and offers a future outlook for the overall [MmWave 5G industry](#). The market research report is a prototype 360° overview of the global MmWave 5G industry with estimated market value, share, growth trends, total revenue, competitive overview, prominent manufacturers and buyers, available product types, and end-use applications. reveal.

The global mmWave 5G market is set to experience remarkable growth, with market size expected to rise from an estimated USD 2.61 billion in 2024 to USD 9.34 billion by 2033, at a compound annual growth rate (CAGR) of 15.20%. The surge in demand for high-speed, low-latency networks is fueling this expansion, with key drivers including the rollout of 5G infrastructure, growing smart city initiatives, and the increasing adoption of IoT devices.

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The expansion of 5G infrastructure is playing a crucial role in boosting the mmWave 5G market,

as telecom operators and governments worldwide invest heavily to meet the rising demand for fast and reliable connectivity. According to 5G Americas, global 5G connections reached nearly 2 billion in early 2024, with projections estimating 7.7 billion connections by 2028. This rapid increase is fueled by applications such as augmented reality (AR), smart cities, and enhanced mobile broadband, all of which rely on mmWave technology for seamless connectivity.

The rising number of IoT devices is also driving the demand for mmWave 5G networks. According to GSMA, IoT connections are expected to grow from 15.1 billion in 2021 to 23.3 billion by 2025, marking an increase of over 54% in five years. mmWave 5G operates at higher frequencies, enabling data transmission speeds exceeding 10 Gbps, making it ideal for applications such as high-definition video streaming, AR, and virtual reality (VR). As more smart devices enter the market, telecom providers are investing in mmWave infrastructure to support the growing need for high-speed connectivity.

Smart City Development Fuels Market Growth

The increasing adoption of smart city initiatives worldwide is a key driver of mmWave 5G market expansion. Smart cities rely on advanced technology to manage traffic, public safety, and urban services efficiently. According to the Organisation for Economic Co-operation and Development (OECD), the global smart city market is expected to grow from USD 511.6 billion in 2022 to over USD 1,024 billion by 2027, reflecting a CAGR of nearly 15%.

Cities like Hanoi have already begun deploying mmWave technology to support applications such as high-definition surveillance and intelligent transportation systems. These investments enhance urban infrastructure, improve quality of life, and attract businesses. The ability of mmWave 5G to connect large numbers of devices with ultra-low latency makes it a crucial component of smart city development.

Challenges in Deployment Due to High Costs

Despite strong growth prospects, the adoption of mmWave 5G faces challenges, particularly in terms of high deployment costs. The technology requires a dense network of small cells due to the short range of mmWave signals, significantly increasing infrastructure investment. Unlike traditional networks with fewer large towers, mmWave networks need a high density of small cells to maintain connectivity, leading to higher costs for telecom operators.

This cost burden is particularly challenging in developing regions, where financial resources are limited and priorities often focus on expanding basic connectivity rather than high-speed networks. Even in developed markets, the high capital expenditure required for mmWave infrastructure can slow down deployment, particularly for smaller operators. To accelerate adoption, industry stakeholders are exploring cost-effective deployment strategies and regulatory support to make mmWave technology more accessible.

mmWave 5G Market Segmentation: Surveillance Leads, AR/VR Gains Momentum

In terms of end-user applications, real-time surveillance cameras currently dominate the mmWave 5G market. The demand for high-resolution, low-latency video transmission is driving adoption in security and surveillance applications. mmWave 5G's ultra-fast, reliable data transmission ensures real-time monitoring and efficient data processing, making it an essential technology for public safety and security sectors.

Meanwhile, AR/VR is poised to be the fastest-growing segment in the mmWave 5G market. The immersive experiences offered by AR/VR require high-bandwidth and low-latency connectivity, which mmWave 5G can provide. As AR/VR applications expand across entertainment, healthcare, and industrial training, the need for mmWave 5G solutions is expected to rise significantly.

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Competitive Terrain:

The global MmWave 5G industry is highly consolidated owing to the presence of renowned companies operating across several international and local segments of the market. These players dominate the industry in terms of their strong geographical reach and a large number of production facilities. The companies are intensely competitive against one another and excel in their individual technological capabilities, as well as product development, innovation, and product pricing strategies.

Leading Market Players Profiled in the Report:

NXP Semiconductors N.V.

Airspan Networks Inc.

AT&T Inc.

Fastweb S.p.A.

SoftBank Group Corp.

Corning Incorporated

Advanced Micro Devices, Inc. (AMD)

Huawei Technologies Co., Ltd.

Qualcomm Incorporated

Ericsson

Report Highlights:

Besides offering a vivid depiction of the global MmWave 5G business sphere and its fundamental operations, the latest report provides the industrial chain analysis and list down the current and future market trends and growth opportunities.

The report includes information on the present and historical market scenarios, which helps forecast the market conditions over the next eight years (2020-2027).

The report scrutinizes the salient factors influencing the growth of the market in the near future.

The strategic marketing recommendations, crucial information related to the new market entrants, and expansion plans of various businesses are poised to provide the reader with a competitive edge in the market.

The global MmWave 5G market report covers the analysis of drivers, trends, limitations, restraints, and challenges arising in the MmWave 5G market. The report also discusses the impact of various other market factors affecting the growth of the market across various segments and regions. The report segments the market on the basis of types, applications, and regions to impart a better understanding of the MmWave 5G market.

MmWave 5G Market Segmentation Analysis

By Component Outlook (Revenue, USD Million; 2020-2033)

Hardware

Antennas and Transceiver Components

Communication and Networking Components

Frequency and Sources and Related Components

RF and Radio Components

Sensors and Controls

Power and Battery Components

Other Hardware

Solutions

Services

Professional Services

Consulting

Development and Integration

Support and Maintenance

Managed Services

By Use Case Outlook (Revenue, USD Million; 2020-2033)

eMBB

FWA

mMTC

URLLC

By Application Outlook (Revenue, USD Million; 2020-2033)

Real-time Surveillance Cameras

AR/VR

Industry 4.0

Live Streaming

Transport Connectivity

Ultra High-definition Video

Other Applications

By Bandwidth Outlook (Revenue, USD Million; 2020-2033)

24GHz to 57GHz

57GHz to 95GHz

95GHz to 300GHz

By End User Outlook (Revenue, USD Million; 2020-2033)

Aerospace and Defence

Telecom

Media and Entertainment

Automotive and Transportation

Public Safety

Healthcare and Life Sciences

Other End Users

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Regional Outlook:

North America (the U.S., Canada, Mexico)

Europe (the U.K., Germany, France, Italy)

Asia Pacific (India, China, Japan, Korea)

Latin America (Brazil, Argentina, Ecuador, Chile)

Middle East & Africa (Egypt, Turkey, Saudi Arabia, Iran)

The study will prove useful for leading companies looking to find new sources of income by helping them to understand the market and its underlying dynamics. It will also be useful for businesses looking to expand into new markets or diversify their current operations.

How will this Report Benefit you?

An Emergen Research report of 250 pages contains 194 tables, 189 charts and graphics, and anyone who needs a comprehensive analysis of the global MmWave 5G market, as well as commercial, in-depth analyses of the individual segments, will find the study useful. Our recent study allows you to assess the entire regional and global market for MmWave 5G. In order to increase market share, obtain financial analysis of each segment and the whole market.

Thank you for reading our report. For further details or to inquire about customization, please let us know and we will offer you the report as per your needs.

Eric Lee

Emergen Research

+ +91 90210 91709

sales@emergenresearch.com

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