

Wireless Mesh Networking - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Wireless Mesh Networking Market size is estimated at USD 9.56 billion in 2024, and is expected to reach USD 14.57 billion by 2029, growing at a CAGR of 8.78% during the forecast period (2024-2029).

The global wireless mesh networking (WMN) market is expected to experience significant expansion during the forecast period, owing to advancements in the wireless communication sector. The deployment of this technology is being driven by major advantages such as resilient communications, low financial cost, and flexible scale.

Key Highlights

- Another advantage of these networks is their auto-configuration and self-organization capability, which allows them to enhance coverage, capacity, and availability by deploying more WAPs without disturbing other nodes. This makes them easy to expand and suitable for various applications.
- In July 2023, Rajant Corporation, one of the leading global pioneers of Kinetic Mesh wireless networks headquartered in Malvern, Pennsylvania, entered a strategic distribution agreement with Crossover Distribution last year. Crossover is one of the leading wireless solutions providers skilled in design and engineering expertise to support North America. Their agreement represents Rajant's further global investment to introduce its global-leading Kinetic Mesh solution to Crossover's customers within industries such as mining, indoor automation, smart cities, public safety, and rural broadband.
- The wireless mesh networking market is experiencing significant growth due to increasing adoption of IoT and industrial automation across all sectors. Innovations in this technology are creating new applications in various markets, including the fixed wireless market.
- Wireless mesh networking (WMN) is also ideal for tracking pallets and monitoring large physical objects with a highly reliable wireless connectivity network due to its connectivity advantage and low cost. This technology can easily track key data across the

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factory floor and multiple locations to identify issues before they occur, attracting many vendors to offer industry-oriented products.

-With growing automation in the agriculture sector, WMN technology is also excellent for tracking sun exposure and water levels in crops. It can be scaled at a low cost with mesh-enabled nodes across an entire land, to develop a cellular connected IoT farm.

Wireless Mesh Networking Market Trends

Increasing Outdoor use of Wireless Mesh Networking is Expected to Drive the Market Growth

- The popularity of inexpensive Wi-Fi clients has led to new service opportunities and applications that improve user productivity and responsiveness through outdoor wireless access. This trend is particularly important in Industry 4.0, where solutions like WMN are needed to solve latency issues across facilities.
- ABB's extensive coverage in the global WMN market, and the extension of its portfolio for major end-users, demonstrate the demand for WMN routers and client nodes. For example, the company provided a wireless mesh field area network to a utility facility in New York's Mid-Hudson River Valley. This network encompassed high capacity, low latency, and an ability to support multiple utility applications. The company's solutions and services included TropOS 6420 outdoor mesh routers, TropOS 1410 mesh edge nodes, SuprOS communication network management system, as well as design, installation, customer service, and maintenance of the TropOS network.
- The company also provided similar solutions to an oil storage tank farm in Texas, which required reliable communication in an environment with metal tanks that reflected radio signals, low latency wireless communications to support real-time SCADA applications, and support for Internet access during mobile fieldwork.
- According to Ericsson, 5G fixed wireless access (FWA) connections are expected to reach 236 million globally by 2028. In 2022, 5G FWA connections globally reached 19.23 million.
- As the demand for outdoor wireless access increases, customers with tight budgets and reduced resources are likely to adopt wireless LAN (WLAN) solutions that take full advantage of existing tools and network resources to address ease of deployment, knowledge, and WLAN security issues in a cost-effective way. However, outdoor solutions face challenges such as environment, coverage, the total cost of ownership (TCO), and physical device security, which may make them less attractive compared to indoor wireless solutions.

North America is Expected to Hold Significant Market Share

- The wireless mesh network market in the United States remains the largest in the world. The high adoption rates for security surveillance and increased demand for mission-critical applications have been significant contributors to the market's growth in North America. This growth has led to a series of new product launches and mergers and acquisitions in the region.
- In North America, home networking, video surveillance, and medical device connectivity applications are expected to experience significant growth over the next five years. Meanwhile, the United Kingdom has seen a rise in the adoption of wireless mesh networks in various industrial sectors, such as oil and gas, chemicals, and mining. This adoption is driven by the need for seamless communication in remote locations, as well as the rapid uptake in mobile and handheld devices, which has led to an increase in demand for WMN solutions.
- In 2022, TalkTalk, a company that provides pay television and internet access services in the United Kingdom, launched its new Future Fiber 900 and Total Home Wi-Fi package. This package combines high speed and coverage to provide customers with seamless connectivity throughout their homes. TalkTalk's Future Fiber 900 package includes two Amazon eero Pro 6 mesh Wi-Fi devices.

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- The expansion of the wire mesh networking market in the United Kingdom is also fueled by government initiatives aimed at building free municipal wireless networks in public locations. A municipal wireless network spans the entire city and is commonly accomplished by installing a wireless mesh network to provide municipal broadband through Wi-Fi to significant portions of the entire municipal territory. Typically, hundreds of wireless access points are installed outdoors, often on poles, in a typical deployment plan.

Wireless Mesh Networking Industry Overview

The wireless mesh networking market is semi-consolidated due to the high initial investments and infrastructure required by firms. Some key companies in the market include ABB, Cisco, and HP. Recent developments in the market include:

- January 2023 - Motorola brand, announced the expansion of its e-commerce footprint with the launch of Motorola home network devices on HomeDepot.com. The organization's e-commerce partnership brings Motorola-branded networking solutions directly to Home Improvement shoppers across North America. The adoption of WiFi 6-enabled devices continues; working with Home Depot, Minim's e-commerce relationship would offer eight high-performance devices from the Motorola home network portfolio, including the Motorola MH7603 WiFi 6 Mesh System.
- June 2022 - Huawei unveiled the HUAWEI WiFi Mesh 7, which extends its mesh router product line. The new Huawei smart mesh routers come in two packs and enable blazing-fast Wi-Fi 6 Plus connection rates for up to 250 devices within 6,000 square feet. They are ideal for large homes that require high-speed, dependable, and secure internet connections for everyone at home.
- May 2022 - Linksys introduced two new Wi-Fi 6 mesh systems designed to provide peak wifi performance to home users, particularly distant workers, multimedia streams, and multi-user gaming. The Linksys Hydra 6 and Linksys Atlas 6 are the company's latest entry-level dual-band devices and the brand's most affordable versions to date.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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