

ZigBee - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 120 pages | Mordor Intelligence

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Report description:

The ZigBee Market size is estimated at USD 4.87 billion in 2024, and is expected to reach USD 6.51 billion by 2029, growing at a CAGR of 6.01% during the forecast period (2024-2029).

The low-cost and low-powered mesh network is widely deployed for controlling and monitoring applications, covering the range of 10-100 meters. This communication system is less expensive and more straightforward than the other proprietary short-range wireless sensor networks, such as Bluetooth and Wi-Fi connectivity.

Key Highlights

- Due to the rising trend toward adopting smart devices, the increasing consumer electronics industry is expected to drive the application of ZigBee-based communication services used for monitoring and controlling devices based on IEEE 802.15.4 across emerging economies.
- Growing demand for the Zigbee broad-based deployment of wireless networks with low-cost, low-power solutions that can run for years on inexpensive batteries for a host of monitoring and control applications across smart energy/smart grid & building automation systems with significant advancements is expected to drive the market.
- The adoption of smart sensor technology, connectivity improvements, and advancements in cloud computing have helped drive the adoption and evolution of Industrial IoT. This trend is also expected to drive the growth of ZigBee in small industrial environments where factory devices have to communicate over a short distance.
- The Internet of Things has been growing across smart home applications. It is expected to become more customizable to give more control to users and enhance the appliance operating functions. For instance, Loup Ventures, a venture capital firm that invests in virtual reality, augmented reality, artificial intelligence, and robotics, the global smart speaker market's revenue is expected to reach USD 35.5 billion by 2025.

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-ZigBee networks use a mesh topology where all devices ('nodes') can communicate with each other to form a wireless mesh network. The mesh network helps the devices share over numerous paths and regularly optimize their connections to other devices, enabling the mesh to recover from wireless interference or broken links automatically.

Zigbee Market Trends

Smart Homes & Building Sector is Gaining Traction Due to Emergence of Automation

- ZigBee network is primarily intended for low-duty cycle sensors, those active for less than 1% of the time. It is an IEEE 802.15.4-based suite for high-level communication across the smart home ecosystem due to its proximity, low data rate, and low power system features.
- Zigbee uses a variety of information transfer mechanisms, such as direct, group, and broadcasting addresses. Mesh network in this internet protocol can be established, which enables the long-distance communication of information across the building automation sector.
- Increasing investments in start-ups such as Hypervolt, HIXAA, SmartRent, and other SMEs help to gain new IoT-based projects in industries that are likely to create a need for a high-performance, low-power IoT MCUs market over the forecast period.
- For instance, in 2022, Renesas Electric Corporation introduced the 32-bit RA Family of microcontrollers (MCUs). The new product is based on the Arm Cortex-M23 core, which provides shallow power consumer MCUs explicitly designed for IoT endpoint applications such as industrial automation, medical devices, intelligent home appliances, and wearables.
- Further, with the increasing investments and adoption of innovative home technologies, consumers start to perceive products, such as voice-activated assistants and smart security systems, as standard household items rather than redundant luxuries, thereby driving the application of the Zigbee communication product integrated across the end-user industry.

North America to Account for the Most Significant Share in the Market

- Smart homes are on the rise across North America, where people in the region are increasingly looking to automate their homes. Dependence on smartphones and mobile apps is set to increase as smartphones offer an attractive and intuitive window into controlling smart home technology.
- For instance, in October 2021, The United States Department of Energy (DOE) announced \$61 million in funding for ten pilot projects using new technology to transform thousands of homes and workplaces into cutting-edge, energy-efficient structures. These Connected Communities can interact with the electrical grid to optimize their energy consumption, significantly reducing carbon emissions and energy costs. Which further increases market growth.
- With nearly 30 million U.S. households projected to add smart home technology, the products consumers want to add to their homes include connected cameras, video doorbells, connected light bulbs, smart locks, and smart speakers that find the application of Zigbee standards for their communication medium.
- Also, the adoption of voice-powered smart speakers is taking off, with an estimate of smart devices such as the Amazon Echo, Google Home, and Sonos One that will be installed in most U.S. households, thereby driving the application of the Zigbee connectivity medium during the forecast period.
- According to a recent Stanford University and Avast study, North American homes have the highest density of IoT devices of any region in the world. Notably, 66% of homes in the region have at least one IoT device. Additionally, 25% of North American homes boast more than two devices. Due to robust cloud infrastructure, an increasing number of connected devices, and advancements in artificial intelligence and machine learning technologies in the region, the market for ZigBee is expected to grow.
- The average household in the region would have an average of nine devices by 2022, and nearly half (48%) of total devices and

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connections will be video capable. Hence, with the growing adoption of IoT devices, the demand for ZigBee chips is expected to increase for these smart home devices over the forecast period.

Zigbee Industry Overview

The ZigBee Market is moderately competitive and consists of a few major players. Some of the players currently dominate the market in terms of market share. However, with the advancement in communication technology across the connectivity medium, new players are increasing their market presence, thereby expanding their business footprint across the emerging economies.

- December 2021- Silicon Labs, a pioneer in secure, intelligent wireless technology for a more connected world, has introduced a first-of-its-kind 3D virtual smart home platform. This interactive journey guides users through innovative smart home solutions, applicable protocols, and ecosystem connections. Users can explore three use cases: home security, home automation, and health, as well as the protocols and ecosystems they work with and connect to on a self-guided tour.
- November 2021- Microchip Technology has announced the release of the second development tool in its Smart Embedded Vision initiative for designers who use its PolarFire RISC-V System on Chip (SoC) Field Programmable Gate Array (FPGA). The PolarFire device, the industry's lowest-power SoC FPGA in its class, is the only mid-range device that supports dual 4K video processing and quad-core RISC-V application-class processors running both the Real Time Operating System (RTOS) and rich operating systems such as Linux.

Additional Benefits:

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

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