

IoT Device Electronics Market Forecasts to 2034 – Global Analysis By Device Type (Smart Home Devices, Wearables, Industrial IoT Devices, Connected Vehicles and Healthcare IoT Devices), Component, Connectivity Technology, Application and By Geography

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Abstracts

According to Statistics MRC, the Global IoT Device Electronics Market is accounted for \$97.3 billion in 2026 and is expected to reach \$337.2 billion by 2034 growing at a CAGR of 16.8% during the forecast period. IoT device electronics consist of the essential hardware elements that allow smart devices to detect, process, and exchange data through connected networks. These systems generally include sensors, microcontrollers, wireless communication modules, power regulation circuits, and embedded firmware that function together to gather and share information instantly. Such electronics are widely implemented in applications like smart residences, industrial control systems, healthcare devices, and intelligent transportation networks. Progress in semiconductor innovation, energy-efficient chip architectures, and modern wireless technologies is enhancing performance while reducing size and power consumption. With the rapid expansion of connected environments, IoT device electronics remain fundamental for delivering dependable, scalable, and energy-optimized smart technology solutions.

According to IoT Analytics (State of IoT 2022 report), the number of connected IoT devices worldwide reached 14.4 billion in 2022 and is projected to grow to 27 billion by 2025, driven by adoption in smart homes, industrial IoT, and connected vehicles.

Market Dynamics:

Driver:

Rising adoption of smart home technologies

The expanding use of smart home solutions is significantly boosting the IoT device electronics market. Homeowners are increasingly installing connected technologies such as intelligent lighting, smart thermostats, surveillance systems, and voice-enabled assistants to enhance comfort, safety, and energy management. These solutions depend on specialized IoT electronic components like sensors, processors, and wireless connectivity modules to gather and transmit data instantly. Factors including rapid urban growth, improved broadband infrastructure, and rising consumer spending power are encouraging wider adoption of home automation systems.

Restraint:

High implementation and integration costs

The significant expenses associated with implementing and integrating IoT technologies act as a restraint for the IoT device electronics market. Organizations must invest in various components such as sensors, electronic modules, communication systems, and supporting software infrastructure to deploy IoT solutions effectively. Additional costs arise when integrating these devices with legacy systems and establishing reliable data processing and network management frameworks. Smaller enterprises often face budget limitations that make large-scale IoT deployment challenging. Moreover, ongoing operational expenses including system maintenance, software updates, and cybersecurity measures further increase total costs.

Opportunity:

Expansion of smart city projects

The growing development of smart city infrastructure offers major growth opportunities for the IoT device electronics market. Municipal authorities are increasingly implementing connected solutions to enhance urban services including traffic regulation, energy efficiency, environmental monitoring, and public safety management. These solutions depend on IoT devices that integrate sensors, processors, and communication technologies to capture and transmit operational data. Systems such as smart street lighting, intelligent transportation networks, connected waste management, and

surveillance platforms require advanced IoT electronics.

Threat:

Supply chain disruptions in semiconductor components

Instability in semiconductor supply chains poses a major threat to the IoT device electronics market. Connected devices require numerous electronic components such as microcontrollers, sensors, and communication chips, which depend on a stable semiconductor manufacturing ecosystem. Events such as global chip shortages, geopolitical conflicts, or logistical disruptions can reduce component availability and raise production costs. Delays in raw material procurement or manufacturing processes may interrupt the production schedules of IoT device manufacturers.

Covid-19 Impact:

The COVID-19 outbreak influenced the IoT device electronics market in both challenging and positive ways. At the beginning of the pandemic, lockdowns, factory closures, and shortages of semiconductor components disrupted manufacturing activities and slowed product supply. Despite these obstacles, the crisis increased the need for connected technologies that support remote operations and automated monitoring. Organizations adopted IoT solutions to maintain productivity while reducing human interaction. Healthcare providers used connected medical devices for remote patient tracking, and consumers showed greater interest in smart home technologies during extended periods at home.

The industrial IoT devices segment is expected to be the largest during the forecast period

The industrial IoT devices segment is expected to account for the largest market share during the forecast period because of their widespread application in sectors such as manufacturing, energy management, transportation, and logistics operations. These systems consist of connected sensors, industrial controllers, and communication technologies that enable continuous monitoring and data exchange between machines and production systems. Businesses utilize these devices to optimize production processes, improve equipment reliability, and enable predictive maintenance strategies. The growing implementation of smart factory concepts and Industry 4.0 technologies has significantly increased the adoption of industrial IoT solutions.

The connectivity modules segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the connectivity modules segment is predicted to witness the highest growth rate because they play a critical role in enabling communication among connected devices. These electronic components allow IoT systems to exchange data using wireless technologies including Wi-Fi, Bluetooth, cellular connectivity, and other communication networks. With the rapid expansion of connected ecosystems in sectors such as smart homes, industrial automation, healthcare monitoring, and intelligent transportation, the need for efficient data transmission is rising significantly. Improvements in communication infrastructure and the growing adoption of wireless networking technologies are increasing the demand for connectivity modules, driving strong growth in this segment.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share because of its highly developed technology environment and widespread use of connected devices in different sectors. The region hosts many leading technology companies and maintains strong innovation capabilities through continuous research and development. Businesses in industries such as healthcare, manufacturing, transportation, and home automation increasingly implement IoT systems to enhance productivity and operational visibility. Furthermore, the region benefits from advanced digital infrastructure and significant investments in smart technologies and automation solutions.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR as the region rapidly embraces digital technologies and connected systems. Increasing industrial development, expanding internet infrastructure, and strong demand for smart consumer devices are encouraging widespread IoT adoption. Many countries in the region are actively implementing smart city programs and modern manufacturing systems that rely heavily on connected electronics. Government policies supporting technological innovation and digital transformation are also strengthening the regional market environment.

Key players in the market

Some of the key players in IoT Device Electronics Market include Intel Corporation, Qualcomm Technologies, Inc., Texas Instruments Incorporated, STMicroelectronics, NXP Semiconductors, Silicon Laboratories, Inc., Broadcom, TE Connectivity, Microchip Technology Inc., MediaTek Inc., Infineon Technologies, Renesas Electronics Corporation, Analog Devices, Inc., Nordic Semiconductor, Cisco Systems, Inc., Honeywell International Inc., Robert Bosch GmbH and Samsung Electronics Co., Ltd.

Key Developments:

In October 2025, Infineon Technologies AG has signed power purchase agreements (PPA) with PNE AG and Statkraft to procure wind and solar electricity for its German facilities. Under a 10-year deal with German renewables developer and wind power producer PNE AG, Infineon will buy electricity from the Schlenzer and Kittlitz III wind farms in Brandenburg, Germany, which have a combined capacity of 24 MW, for its sites in Dresden, Regensburg, Warstein and Neubiberg near Munich.

In February 2025, NXP Semiconductors has acquired AI chip startup Kinara in a \$307 million all-cash agreement. NXP said the acquisition would enable it to “enhance and strengthen” its ability to provide scalable AI platforms by combining Kinara’s NPUs and AI software with NXP’s solutions portfolio. Kinara develops programmable neural processing units (NPUs) for Edge AI applications, including multi-modal generative AI models.

In December 2024, Texas Instruments (TI) and the U.S. Department of Commerce announced an award agreement of up to \$1.6 billion in direct funding through the U.S. CHIPS and Science Act, following the preliminary memorandum of terms announced in August 2024. The funding will help support three of TI's new 300mm wafer fabs currently under construction in Texas and Utah.

Device Types Covered:

Smart Home Devices

Wearables

Industrial IoT Devices

Connected Vehicles

Healthcare IoT Devices

Components Covered:

Sensors

Microcontrollers & Processors

Connectivity Modules

Power Management Electronics

Memory & Storage Components

Embedded Software & Firmware

Connectivity Technologies Covered:

Short-Range

Long-Range

Hybrid/Multimode Solutions

Applications Covered:

Smart Homes & Buildings

Industrial Automation & Smart Manufacturing

Healthcare & Medical Devices

Transportation & Logistics

Retail & Smart Commerce

Agriculture & Environmental Monitoring

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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