

Japan Internet of Things Market Assessment, By Component (Hardware, Software, Services), By Application (Smart Home, Smart Cities, Smart Wearables, Smart Agriculture, Smart Vehicles, Smart Healthcare, Smart Enterprise Solutions, Others), By Distribution Channel (Online, Offline), By End-user (IT & Telecom, Automotive & Transportation, BFSI, Retail, Healthcare, Government, Energy & Utilities, Others), By Region, Opportunities and Forecast, FY2017-FY2031

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## Report description:

Japan Internet of Things (IoT) Market size is valued at USD 11.71 billion in FY2023, expected to reach USD 50.08 billion in FY2031 with a CAGR of 19.92% for the forecast period between FY2024 and FY2031. Japan has a highly developed economy and a booming telecommunication sector. Japan's preoccupation with robotics and other cutting-edge technologies is embodied in its development of the Internet of Things, which also represents a practical strategy for dealing with its ageing population by lowering the cost of human resources. IoT applications started slowly with minimal hype in Japan. In Japan, there are more than 3.17 million unique SIM card IoT subscriptions. More than 1.5 million people utilize NTT DoCoMo, mostly in logistical support, remote metering, remote payment (including vending machines), surveillance, and transportation.

Conversely, KDDI has concentrated on high-speed, large-capacity IoT communications from the very beginning and has amassed more than one million users in the transportation and logistics sectors through in-vehicle, small-scale, lightweight, and inexpensive IoT communications services.

Telecommunication Industry Boosting Japan Internet of Things (IoT) Market

The telecommunication industry plays a significant role in boosting the Japan Internet of Things (IoT) market. Telecom companies provide the essential infrastructure and connectivity for IoT devices to communicate and exchange data seamlessly. Telecom

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operators offer IoT-specific SIM cards and connectivity plans for machine-to-machine (M2M) communication. These SIM solutions enable seamless communication between IoT devices and the cloud, providing a reliable and secure connection for transmitting data. Telecom operators in Japan have been actively deploying advanced networks like 5G, which offer higher data transfer speeds, lower latency, and improved network capacity. These features are crucial for supporting the massive number of IoT devices expected to be connected. The enhanced connectivity of 5G facilitates real-time data transmission and enables the implementation of IoT applications that demand high bandwidth.

For instance, in May 2022, SoftBank Corp. announced the launch of a nationwide deployment of MEC servers in Japan and the opening of a 5G MEC (Multi-access Edge Computing) facility in the Kanto region. SoftBank 5G MEC provides a low-latency, high-quality (low-jitter), and highly secure service experience using 5G SA (5G Stand Alone) commercial services. By encouraging the IoT deployment of various businesses to achieve digital transformation, SoftBank is expected to advance the industry as a digital platform provider in near 5G future.

## Semiconductor to Propel the Demand

Semiconductor IoT deployment in Japan is critical to the country's efforts to embrace the Internet of Things (IoT) and advance its technological capabilities. Semiconductors are the foundation of IoT devices, enabling connectivity, data processing, and communication between various intelligent objects. Japanese semiconductor companies are at the forefront of producing IoT-specific chips and sensors. These components are vital for capturing data from the physical world and transmitting it to IoT platforms for further analysis and decision-making. IoT sensors are crucial in various applications, including industrial automation, smart cities, healthcare monitoring, and consumer electronics.

For instance, in January 2022, Cybertrust Japan Co., Ltd., SB Technology Corp., and Qualcomm Technologies, Inc. announced to collaborate supporting the deployment of smart solutions through the Qualcomm IoT Services Suite offering. This will initially assist businesses and entities looking to adopt and integrate smart solutions in Japan, with plans to expand globally in the future. Through this partnership, the organizations hope to explore projects with Qualcomm Smart Cities Accelerator Program ecosystem participants and create smart solutions for use cases involving smart campuses, smart parking, smart energy-management, smart security, smart manufacturing, and other scenarios. In an effort to hasten the adoption of smart solutions across various industries, the three companies are combining best-in-class technologies to implement to various sectors.

Manufacturing Autonomous Vehicles Contributing Major Growth

Autonomous vehicles are a significant aspect of IoT deployment in Japan, as they combine cutting-edge technologies to create smart, self-driving transportation systems. Integrating autonomous vehicles into the IoT ecosystem in Japan involves various components and collaborations, driving advancements in the automotive industry. Autonomous vehicles heavily rely on IoT technologies for communication and data exchange. These vehicles are equipped with many sensors, cameras, LiDAR, and other IoT devices to gather real-time data about the surroundings, road conditions, and traffic. The data collected is then processed and analyzed to make informed decisions, enabling the vehicle to navigate autonomously.

For instance, in May 2023, Fukui launched Japan's first autonomous level 4 driving in Eiheiji as smart transportation. A seven-seater electric cart created by the National Institute of Advanced Industrial Science and Technology and others operates over a part of a walking trail covering about 2 kilometres in Eiheiji, where level 4 autonomous driving was permitted for the first time in the country. One person in charge of remote monitoring controls up to three of these electric carts; there is no operator within the cart.

### Government Initiatives

To stimulate the development of novel technologies and business models in Japan, the government of Japan developed the sandbox framework in 2018. Although the framework does not restrict the types of rules, it currently includes those that apply to the financial services, healthcare, mobility, and transportation sectors. Any company, including those from abroad, is eligible to apply to carry out demonstrations under this new framework and explore the potential of cutting-edge technologies like artificial intelligence (AI), the internet of things (IoT), or blockchain for future business, mainly if they are unable to launch new businesses using these technologies due to current Japanese regulations. Monitoring of the initiatives allows the government to assess the technology's social and economic feasibility.

# Impact of COVID-19

COVID-19 pandemic significantly impacted various industries, including the IoT (Internet of Things) market in Japan. The pandemic

accelerated the need for digital transformation across industries. Companies in Japan turned to IoT solutions to support remote work, monitor supply chains, enable contactless services, and ensure business continuity during lockdowns and restrictions. This increased demand for IoT devices and services to facilitate these transformations. The pandemic exposed vulnerabilities in global supply chains. To address this, businesses in Japan looked to IoT solutions for better supply chain visibility and optimization. IoT-enabled sensors and tracking devices helped monitor inventory levels, track shipments, and ensure smoother logistics operations.

### Impact of Russia-Ukraine War

Geopolitical tensions and conflicts disrupted global supply chains, affecting the production and availability of IoT components and devices. Japan relies on international supply chains for semiconductor chips, sensors, and other IoT components. Disruptions to these supply chains impacted the availability and pricing of IoT products in Japan. In response to geopolitical risks, businesses in Japan reevaluate their supply chain strategies and consider diversifying their sourcing of IoT components and technologies to mitigate potential risks.

Key Players Landscape and Outlook

The Japan Internet of Things Market is exceptionally competitive and remains highly concentrated. Market participants in the IoT market are attempting to increase their market share through various business methods such as collaborations, agreements, and acquisitions and mergers of multiple players across the value chain. Additionally, companies are paying close attention to device quality and efficient service and constantly developing new products to meet client demand.

For example, in October 2021, Sony Corporation launched AITRIOS edge AI sensing platform in Japan, US and Europe. AITRIOS provides partners with a variety of capabilities in addition to the IMX500 intelligent vision sensor that aid in the creation of solutions. Developers are manufacturing AI-driven sensing applications, module integrators of cameras that make AI cameras, and system integrators creating systems that integrate these AI cameras and sensing applications are all examples of platform partners. Image sensors collect a lot of data when compared to other IoT devices, and the challenge of managing such a big number of data has been a barrier to entry for partners.

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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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