

Industrial IoT: Global markets

By BCC Publishing Staff

The global market for industrial internet of things (IoT) technologies and devices was valued at \$124.7 billion in 2022 and is expected to grow at a compound annual growth rate (CAGR) of 21.6% to reach \$391.8 billion by 2028.

Industrial IoT refers to the use of smart actuators and sensors to optimize processes and enable automation within industrial and manufacturing operations. However, alongside productivity improvements, adoption of this technology also poses security risks. For example, there is the possibility of theft of device data or business data, cyber-attacks such as denial of service and distributed denial-of-service, data breaches, and device siphoning.

The market is segmented into hardware, solutions and platforms, and services (Table 1). The solutions and platforms segment is expected to grow at the highest CAGR of 23.1% during the forecast period, mainly because of the need to drive operational efficiency and innovation across industries.

Some key emerging technologies for industrial IoT include

- **5G networks**, which offer robust connectivity for many IoT devices simultaneously. This ability is critical in industrial environments where numerous sensors and machines need to communicate seamlessly.
- **Edge computing and fog computing**, which allow for a combination of local and distributed processing and thus improves the efficiency, reliability, and scalability of industrial IoT applications.
- **Blockchain**, or a distributed ledger that enables the transaction and validation process without the involvement of third parties. Transactions in blockchain are traceable for all authorized users, ensuring the industrial IoT systems' trustworthiness.
- **Machine learning**, which allows organizations to extract more insights from structured and unstructured data compared to traditional business intelligence solutions.
- **Digital twins technology**, which creates a comprehensive and constantly refreshed virtual counterpart of a physical object or activity that can be used to test multiple scenarios, track performance, identify opportunities for improvement, and predict problems.

Currently, the majority of industrial IoT solutions are deployed on-premises due to the ease of customizing and controlling industrial IoT devices and systems within an organiza-

tion's own infrastructure, the avoidance of data and messaging costs, and better security of industrial assets. However, cloud deployments are expected to grow during the forecast period due to their capacity to provide scalable, flexible, and cost-effective solutions.

In 2022, large enterprises accounted for 78% of the industrial IoT market share. But as industrial IoT solutions become more affordable, scalable, and easier to implement, such as with the adoption of cloud deployments, smaller organizations are expected to increasingly leverage industrial IoT technologies to improve their operational efficiency, enhance customer experience, and gain a competitive edge in the market.

The manufacturing segment accounted for the largest share of the market with 33.6% in 2022. However, the healthcare sector is poised to be the fastest-growing industry throughout the forecast period due to the increasing demand for advanced healthcare solutions and the potential for transformative benefits.

Asia-Pacific led the industrial IoT market in 2022 with a market share of 37.3% due to its strong manufacturing environment, quick uptake of new technologies, and policies encouraging digital transformation. The North American region came in second, with the U.S. being by far the largest industrial IoT market in this region, accounting for 79.3% of the region's market in 2022. This dominance is driven in part by the U.S. government's support for digital transformation and cybersecurity as well as the development of IoT standards and laws, which have encouraged businesses to adopt industrial IoT solutions.

About the author

BCC Publishing Staff provides comprehensive analyses of global market sizing, forecasting, and industry intelligence, covering markets where advances in science and technology are improving the quality, standard, and sustainability of businesses, economies, and lives. Contact the staff at Helia.Jalili@bccresearch.com.

Resource

BCC Publishing Staff, "Industrial IoT (IIoT): Global markets," BCC Research Report IFT299A, May 2024. <https://bit.ly/BCC-May-2024-industrial-IoT> ■

Table 1. Global market for industrial IoT, by offerings, through 2028 (\$ millions)

Offerings	2022	2023	2028	CAGR % (2023–2028)
Hardware	66,101.9	77,278.7	196,415.4	20.5
Solutions and platforms	44,301.4	52,928.4	149,895.5	23.1
Services	14,308.0	16,964.7	45,512.0	21.8
Total	124,711.3	147,171.8	391,822.9	21.6