

Industrial IoT Automation Market Forecasts to 2032 - Global Analysis By Component (Hardware, Software, and Services), Deployment Model, Connectivity Type, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Industrial IoT Automation Market is accounted for \$134.64 billion in 2025 and is expected to reach \$301.38 billion by 2032 growing at a CAGR of 12.2% during the forecast period. Industrial IoT Automation involves linking industrial assets such as machines, devices, and control systems through networked sensors and intelligent software to automate and enhance industrial processes. It leverages IoT connectivity, advanced analytics, and cloud or edge technologies to continuously collect and analyze operational data. This approach enables faster responses, smarter control, and data-driven optimization of production and infrastructure. As a result, organizations achieve higher efficiency, reduced downtime, improved product quality, proactive maintenance, and safer operations across diverse industrial applications.

Market Dynamics:

Driver:

Demand for operational efficiency

Manufacturers are increasingly deploying connected sensors, smart controllers, and real-time analytics to minimize downtime and optimize asset utilization. IIoT platforms enable continuous monitoring of production processes, helping organizations identify inefficiencies and reduce waste. As competition intensifies, industries are under pressure to lower operating costs while maintaining high productivity levels. Automation

supported by IIoT enhances decision-making through data-driven insights and performance visibility. The integration of edge computing and AI further accelerates response times and process optimization. These benefits are driving widespread adoption of IIoT solutions across discrete and process industries.

Restraint:

Lack of standardization

Industrial environments often rely on heterogeneous systems using proprietary protocols and legacy communication frameworks. This fragmentation complicates interoperability between devices, platforms, and applications from different vendors. Enterprises face increased integration costs and longer deployment timelines due to incompatible architectures. The lack of standardized cybersecurity and data exchange frameworks further elevates operational risk. Smaller manufacturers, in particular, struggle to align diverse systems without specialized technical expertise. Until global standards mature, scalability and seamless connectivity will remain challenging for IIoT adoption.

Opportunity:

Predictive maintenance as a service

By leveraging sensor data, machine learning, and cloud analytics, service providers can forecast equipment failures before they occur. This approach helps industries reduce unplanned downtime and extend asset life cycles. Subscription-based maintenance models lower upfront investment barriers for manufacturers. Predictive maintenance services also enable continuous performance benchmarking across multiple facilities. As industrial assets become more connected, data-driven maintenance strategies are gaining traction. This shift is opening new revenue streams for IIoT solution providers and system integrators.

Threat:

Data privacy & sovereignty

IIoT systems generate vast volumes of operational data that are often transmitted to cloud platforms for analysis. Regulatory frameworks governing data storage and cross-border data transfer vary significantly by region. Enterprises fear unauthorized access,

cyberattacks, and misuse of sensitive production data. Compliance with data localization laws increases deployment complexity and costs. Industries operating across multiple geographies face challenges in managing secure data flows. These concerns can slow cloud-based IIoT adoption and limit market expansion.

Covid-19 Impact:

The COVID-19 pandemic significantly influenced the adoption trajectory of Industrial IoT automation solutions. Lockdowns and workforce restrictions disrupted traditional manufacturing operations worldwide. As a result, industries accelerated investments in remote monitoring and automated process control systems. Supply chain disruptions highlighted the importance of real-time visibility and predictive analytics. IIoT-enabled automation helped manufacturers maintain continuity with minimal human intervention. The pandemic also reinforced the value of digital twins and virtual commissioning tools. Post-pandemic strategies increasingly prioritize resilient, connected, and automated industrial ecosystems.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period, driven by extensive deployment of sensors, actuators, industrial gateways, and controllers across manufacturing facilities. Hardware components form the foundational layer of IIoT architectures by enabling data acquisition and machine connectivity. Growing investments in smart factories are accelerating demand for advanced industrial devices. Ruggedized hardware capable of operating in harsh environments is witnessing strong uptake. Continuous innovation in sensor accuracy and edge processing capabilities is enhancing performance.

The healthcare & life sciences segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the healthcare & life sciences segment is predicted to witness the highest growth rate. Hospitals and laboratories are increasingly adopting IIoT solutions to improve asset tracking and equipment utilization. Connected medical devices enable real-time monitoring of operational parameters and compliance metrics. Automation supported by IIoT enhances workflow efficiency in pharmaceutical manufacturing and bioprocessing. Predictive analytics helps reduce equipment downtime in critical healthcare environments. The integration of IIoT with regulatory reporting systems improves traceability and quality assurance.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share. Rapid industrialization and large-scale manufacturing expansion are key contributors to regional growth. Countries such as China, India, Japan, and South Korea are investing heavily in smart factory initiatives. Government-backed programs promoting digital manufacturing are accelerating IIoT adoption. The presence of a strong electronics and semiconductor manufacturing base further supports market expansion. Local vendors are collaborating with global technology providers to enhance solution availability.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to early adoption of advanced digital technologies and automation solutions. Industrial enterprises are integrating AI, cloud platforms, and edge analytics into IIoT deployments. Strong R&D investment is fostering innovation in smart manufacturing and connected operations. Regulatory emphasis on industrial cybersecurity is encouraging secure IIoT implementation. The presence of major IIoT platform providers strengthens the regional ecosystem.

Key players in the market

Some of the key players in Industrial IoT Automation Market include Siemens AG, SAP SE, General Electric, Hitachi Vantara, Cisco Systems, Inc., Robert Bosch GmbH, Rockwell Automation, Inc., ABB Ltd., Schneider Electric SE, PTC Inc., Honeywell International Inc., Intel Corporation, IBM Corporation, Amazon Web Services, and Microsoft Corporation.

Key Developments:

In July 2025, Siemens AG announced that it has completed the acquisition of Dotmatics, a leading provider of Life Sciences R&D software headquartered in Boston and Portfolio Company of global software investor Insight Partners, for an enterprise value of \$5.1 billion. With the transaction now completed, Dotmatics will form part of Siemens' Digital Industries Software business, marking a significant expansion of Siemens' industry-leading Product Lifecycle Management (PLM) portfolio into the rapidly growing and complementary Life Sciences market.

In July 2025, Honeywell announced that it has acquired from Nexceris its Li-ion Tamer business, a leading off-gas detection solution for lithium-ion (li-ion) batteries that detects thermal runaway events. The acquisition enhances Honeywell's portfolio of best-in-class fire life safety technologies within its Building Automation segment and emerged from a partnership with Nexceris over the past 5 years to strategically address lithium-ion battery system safety. The transaction is expected to be immediately accretive to Honeywell's financials.

Components Covered:

Hardware

Software

Services

Deployment Models Covered:

On-Premise

Cloud-Based

Edge Computing

Hybrid

Connectivity Types Covered:

Wired

Wireless

Hybrid

Applications Covered:

Predictive Maintenance

Asset Tracking & Management

Process Optimization

Remote Monitoring & Control

Quality Management

Energy Management

Supply Chain & Inventory Mgmt

Other Applications

End Users Covered:

Manufacturing

Energy & Utilities

Oil & Gas

Transportation & Logistics

Healthcare & Life Sciences

Smart Buildings & Infrastructure

Agriculture & Farming

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032
- 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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