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Industrial IoT in Manufacturing Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Connectivity Type, Deployment Model, Enterprise Size, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Industrial IoT in Manufacturing Market is accounted for $302.1 billion in 2025 and is expected to reach $789.1 billion by 2032 growing at a CAGR of 14.7% during the forecast period. Industrial Internet of Things (IIoT) in manufacturing refers to the integration of smart sensors, devices, and advanced analytics within industrial processes to optimize production, enhance efficiency, and reduce downtime. By connecting machines, tools, and systems through real-time data exchange, IIoT enables predictive maintenance, remote monitoring, and intelligent decision-making. It transforms traditional factories into smart manufacturing environments, fostering automation and operational agility. Leveraging technologies like artificial intelligence, cloud computing, and edge analytics, IIoT empowers manufacturers to improve productivity, ensure quality control, and streamline supply chains while minimizing energy consumption and waste, driving the evolution toward Industry 4.0.

Market Dynamics:

Driver:

Rising need for data-driven manufacturing operations

The growing demand for data-driven manufacturing operations is a key driver of the Industrial IoT market. Manufacturers are increasingly adopting smart sensors and

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analytics to gain real-time insights into production processes. This enables predictive maintenance, reduces downtime, and enhances operational efficiency. Data-driven decision-making supports agile manufacturing, quality control, and supply chain optimization. As competition intensifies and customer expectations rise, leveraging IIoT for intelligent automation and performance monitoring becomes essential for maintaining productivity and profitability.

Restraint:

High Implementation Costs

High implementation costs pose a significant restraint to the adoption of Industrial IoT in manufacturing. Deploying smart sensors, edge devices, and integrated platforms requires substantial investment in hardware, software, and skilled personnel. Small and medium enterprises often struggle with budget constraints, limiting their ability to adopt IIoT solutions. Additionally, the cost of system integration, cybersecurity measures, and ongoing maintenance can be prohibitive. These financial barriers may slow market penetration, especially in developing regions with limited infrastructure.

Opportunity:

Energy Efficiency Goals

Energy efficiency goals present a major opportunity for Industrial IoT in manufacturing. IIoT technologies enable real-time monitoring of energy consumption, helping manufacturers identify inefficiencies and optimize usage. Smart systems can automate energy-saving measures, reduce waste, and support sustainability initiatives. With increasing regulatory pressure and corporate commitments to carbon reduction, IIoT offers a strategic advantage. Manufacturers can lower operational costs while meeting environmental standards, making energy efficiency a compelling driver for IIoT adoption across industries.

Threat:

Cybersecurity Concerns

Cybersecurity concerns represent a critical threat to the Industrial IoT market. As manufacturing systems become more connected, they are increasingly vulnerable to cyberattacks, data breaches, and operational disruptions. Protecting sensitive

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production data and ensuring system integrity requires robust security protocols, which can be complex and costly. The risk of unauthorized access or sabotage can deter adoption, especially in sectors handling proprietary or safety-critical processes.

Covid-19 Impact:

The COVID-19 pandemic accelerated the adoption of Industrial IoT in manufacturing by highlighting the need for remote monitoring, automation, and resilient supply chains. Lockdowns and labor shortages forced manufacturers to rely on digital tools for continuity. IIoT enabled predictive maintenance, real-time analytics, and flexible production models, helping companies adapt to volatile demand. Post-pandemic, the emphasis on operational agility and digital transformation continues to drive investment in IIoT technologies, reshaping manufacturing into a more responsive and data-driven ecosystem.

The wireless technologies segment is expected to be the largest during the forecast period

The wireless technologies segment is expected to account for the largest market share during the forecast period, due to its flexibility, scalability, and ease of deployment. Wireless solutions eliminate the need for complex cabling, enabling seamless connectivity across factory floors. Technologies like Wi-Fi, Bluetooth, and LPWAN support real-time data exchange, remote monitoring, and mobile access. As manufacturers seek agile and cost-effective systems, wireless networks offer rapid integration and adaptability. Their role in enabling smart factories and mobile operations makes them central to IIoT growth.

The production monitoring segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the production monitoring segment is predicted to witness the highest growth rate, due to need for real-time visibility into manufacturing operations. IIoT-enabled monitoring systems track equipment performance, process efficiency, and product quality, allowing for immediate corrective actions. This enhances productivity, reduces downtime, and supports lean manufacturing practices. With growing emphasis on data-driven decision-making and operational transparency, production monitoring is becoming a cornerstone of smart manufacturing strategies, fueling rapid adoption across industries.

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Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, due to rapid industrialization, government initiatives, and strong manufacturing bases in countries like China, Japan, and India. The region benefits from large-scale adoption of automation, rising demand for smart factories, and increasing investment in digital infrastructure. Local manufacturers are embracing IIoT to enhance competitiveness and meet global standards. Asia Pacific's dynamic growth and innovation ecosystem position it as a dominant force in the market.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to advanced technological infrastructure, strong R&D capabilities, and widespread adoption of smart manufacturing practices. The region is home to leading IIoT providers and early adopters across automotive, aerospace, and electronics industries. Supportive government policies focus on energy efficiency and demand for predictive analytics are fueling growth. As digital transformation accelerates, North America continues to lead in innovation and scalable IIoT deployment.

Key players in the market

Some of the key players in Industrial IoT in Manufacturing Market include Siemens, Yokogawa Electric Corporation, Schneider Electric, Emerson Electric, Mitsubishi Electric, Intel Corporation, Hitachi Vantara, IBM, PTC, Cisco Systems, ABB, General Electric (GE Digital), Rockwell Automation, Honeywell, and Bosch.

Key Developments:

In October 2025, Aramco and Yokogawa Electric Corporation have commissioned a suite of autonomous AI-control agents at Aramco's Fadhili gas facility in Saudi Arabia to optimise the acid gas removal unit delivering about a 10–15% drop in amine & steam usage, 5% less power consumption, improved stability and reduced manual intervention.

In October 2025, Yokogawa Electric Corporation has announced that its subsidiary, Yokogawa China, has signed a Memorandum of Cooperation with Sinopec Engineering Group Co., Ltd. (SEG) to jointly pursue global EPC (engineering, procurement and construction) projects. The alliance builds on their prior refining and ethylene

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collaborations in China and deepens partnership in industrial automation and expanded geographic reach.

Components Covered:

- Hardware
- Software
- Services

Connectivity Types Covered:

- Wired Technologies
- Wireless Technologies
- Hybrid Connectivity

Deployment Models Covered:

- On-Premises
- Cloud-Based
- Edge Deployment

Enterprise Sizes Covered:

- Small and Medium Enterprises (SMEs)
- Large Enterprises

Applications Covered:

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- Predictive Maintenance
- Asset Tracking and Management
- Production Monitoring
- Quality Control
- Supply Chain and Logistics Management
- Energy Management
- Workforce Management
- Remote Monitoring

End Users Covered:

- Automotive
- Electronics and Semiconductor
- Heavy Machinery and Equipment
- Chemical and Petrochemical
- Food and Beverage
- Pharmaceutical
- Metals and Mining
- Oil and Gas
- Textile and Apparel
- Other End Users

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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

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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

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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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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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