

Internet of Things in Farm Management Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software, and Services), Farm Size, Deployment Model, Connectivity Technology, Application and By Geography

<https://marketpublishers.com/r/I09E8DB2D3BEEN.html>

Date: June 2025

Pages: 150

Price: US\$ 4,150.00 (Single User License)

ID: I09E8DB2D3BEEN

Abstracts

According to Statistics MRC, the Global Internet of Things in Farm Management Market is accounted for \$11.21 billion in 2025 and is expected to reach \$25.42 billion by 2032 growing at a CAGR of 12.4% during the forecast period. The Internet of Things (IoT) in farm management involves the use of connected devices and sensors to monitor and automate agricultural processes. It enables real-time data collection on soil moisture, weather, crop health, and livestock conditions, allowing farmers to make informed decisions. By optimizing resource use, reducing waste, and improving productivity, IoT transforms traditional farming into smart agriculture, enhancing efficiency, sustainability, and profitability in modern farm operations.

Market Dynamics:

Driver:

Growing cloud computing and big data

The increasing adoption of cloud computing and big data analytics is transforming farm management practices by enabling real-time monitoring and predictive analytics. Farmers can leverage cloud-based platforms to analyze weather conditions, soil quality, and crop health for better decision-making. The ability to process vast amounts of data helps optimize resource allocation and reduce inefficiencies in agricultural operations. Remote access to farm analytics improves productivity, sustainability, and cost

management. As the agricultural sector embraces digital transformation, cloud computing and big data are expected to drive significant market expansion.

Restraint:

Limited internet connectivity in rural areas

The adoption of IoT solutions in farm management is hindered by inadequate internet connectivity in remote and rural regions. Many farms operate in areas with weak network infrastructure, limiting access to cloud-based agricultural analytics. Poor connectivity affects real-time data transmission and disrupts automated farm processes reliant on IoT technology. Governments and private enterprises are working to improve rural internet coverage, but progress remains slow. Without consistent internet availability, widespread adoption of IoT in agriculture remains a challenge.

Opportunity:

Advancements in IoT and sensor technology

Smart sensors can collect detailed data on soil moisture, temperature, humidity, and plant growth, enabling farmers to make informed decisions. The integration of AI-driven analytics with IoT devices helps optimize irrigation, fertilization, and pest control strategies. Wireless sensor networks improve connectivity between farm equipment, increasing automation and precision in agricultural tasks. Cost-effective and energy-efficient IoT solutions are making it feasible for farmers to adopt technology at scale. Growing investments in IoT-enabled farm management solutions are driving industry expansion, fostering sustainable agricultural practices.

Threat:

Lack of technical skills among farmers

The implementation of IoT-based farm management systems is constrained by a shortage of skilled professionals in the agricultural sector. Many farmers lack the technical expertise to operate and maintain IoT devices effectively. The complexity of data interpretation and system integration poses challenges for traditional farm operators. Limited access to training programs and resources further slows IoT adoption. Without proper knowledge and training, farmers may struggle to maximize the benefits of IoT solutions, hindering market growth.

Covid-19 Impact

The COVID-19 pandemic accelerated the adoption of IoT technologies in farm management due to increased reliance on automation and remote monitoring. Restrictions on labor movement highlighted the need for automated systems to ensure efficient farm operations. IoT-based solutions enabled farmers to manage crops remotely, reducing dependence on manual labor. Post-pandemic, the demand for resilient and technology-driven agricultural practices continues to rise.

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, due to the increasing adoption of smart farming devices and equipment. IoT-enabled sensors, drones, automated irrigation systems, and GPS trackers are becoming essential for farm management. Advanced machinery integration enhances productivity by reducing manual errors and improving efficiency. The demand for precision agriculture tools is driving investment in connected hardware solutions.

The precision farming segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the precision farming segment is predicted to witness the highest growth rate, due to the rising demand for data-driven agricultural techniques. Precision farming utilizes IoT-enabled sensors and AI analytics to optimize crop yields and resource utilization. Real-time monitoring and predictive analytics help farmers make informed decisions about irrigation, fertilization, and pest control. Cost-saving benefits and improved sustainability are driving widespread adoption of precision farming technologies.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to its growing adoption of smart agricultural technologies. Increasing population and rising food demand are prompting investments in IoT-based farm management solutions. Government initiatives supporting digital transformation in agriculture are accelerating IoT deployment across farms. Expanding internet access and mobile connectivity are facilitating smart farming adoption.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to its advanced agricultural infrastructure and technological innovations. Strong research and development activities are fostering new IoT applications in farm management. The presence of leading agritech companies is accelerating the adoption of smart farming solutions. Farmers in North America are increasingly investing in automation, IoT devices, and AI-driven analytics for improved efficiency.

Key players in the market

Some of the key players profiled in the Internet of Things in Farm Management Market include John Deere, Sierra Wireless, Trimble Inc., GEA Group, AGCO Corporation, Fasal, Raven Industries, Farmers Edge, IBM Corporation, Valarm, Cisco Systems Inc., Cropin, Microsoft Corporation, Jio Krishi, and Topcon Positioning Systems, Inc.

Key Developments:

In May 2025, John Deere announced the acquisition of Sentera, a leading provider of remote imagery solutions for agriculture headquartered in St. Paul, Minnesota. This acquisition will advance the capabilities of John Deere's existing technology offerings, providing farmers and ag service providers with a more comprehensive set of tools to generate.

In June 2023, Sierra Wireless announced it has partnered with leading software and services provider Amdocs, to provide customers a complete solution that reduces the complexity of designing, deploying, managing and servicing a private cellular network.

Components Covered:

Hardware

Software

Services

Farm Types Covered:

Small & Medium Farms

Large Commercial Farms

Deployment Models Covered:

On-Premises

Cloud-Based

Connectivity Technologies Covered:

Cellular (3G/4G/5G)

Satellite Communication

LPWAN (LoRa, NB-IoT, Sigfox)

Zigbee

Wi-Fi

Bluetooth

Applications Covered:

Precision Farming

Livestock Monitoring

Smart Greenhouses

Irrigation Management

Drone-based Crop Monitoring

Farm Machinery Management

Supply Chain & Inventory Management

Other Applications

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

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Technology Analysis
- 3.7 Application Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY COMPONENT

- 5.1 Introduction
- 5.2 Hardware
 - 5.2.1 Sensors
 - 5.2.2 GPS devices
 - 5.2.3 Drones/UAVs
 - 5.2.4 Cameras
 - 5.2.5 RFID tags
 - 5.2.6 Actuators
 - 5.2.7 Smart irrigation controllers
- 5.3 Software
 - 5.3.1 Farm Management Software
 - 5.3.2 Data analytics platforms
 - 5.3.3 AI and ML-based decision support tools
 - 5.3.4 Cloud computing solutions
- 5.4 Services
 - 5.4.1 Managed Services
 - 5.4.2 Professional Services
 - 5.4.3 Data Services
 - 5.4.4 Consulting and integration services
 - 5.4.5 Maintenance & support services

6 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY FARM TYPE

- 6.1 Introduction
- 6.2 Small & Medium Farms
- 6.3 Large Commercial Farms

7 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY DEPLOYMENT MODEL

- 7.1 Introduction
- 7.2 On-Premises
- 7.3 Cloud-Based

8 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY

CONNECTIVITY TECHNOLOGY

- 8.1 Introduction
- 8.2 Cellular (3G/4G/5G)
- 8.3 Satellite Communication
- 8.4 LPWAN (LoRa, NB-IoT, Sigfox)
- 8.5 Zigbee
- 8.6 Wi-Fi
- 8.7 Bluetooth

9 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY APPLICATION

- 9.1 Introduction
- 9.2 Precision Farming
- 9.3 Livestock Monitoring
- 9.4 Smart Greenhouses
- 9.5 Irrigation Management
- 9.6 Drone-based Crop Monitoring
- 9.7 Farm Machinery Management
- 9.8 Supply Chain & Inventory Management
- 9.9 Other Applications

10 GLOBAL INTERNET OF THINGS IN FARM MANAGEMENT MARKET, BY GEOGRAPHY

- 10.1 Introduction
- 10.2 North America
 - 10.2.1 US
 - 10.2.2 Canada
 - 10.2.3 Mexico
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.2 UK
 - 10.3.3 Italy
 - 10.3.4 France
 - 10.3.5 Spain
 - 10.3.6 Rest of Europe
- 10.4 Asia Pacific

- 10.4.1 Japan
- 10.4.2 China
- 10.4.3 India
- 10.4.4 Australia
- 10.4.5 New Zealand
- 10.4.6 South Korea
- 10.4.7 Rest of Asia Pacific
- 10.5 South America
 - 10.5.1 Argentina
 - 10.5.2 Brazil
 - 10.5.3 Chile
 - 10.5.4 Rest of South America
- 10.6 Middle East & Africa
 - 10.6.1 Saudi Arabia
 - 10.6.2 UAE
 - 10.6.3 Qatar
 - 10.6.4 South Africa
 - 10.6.5 Rest of Middle East & Africa

11 KEY DEVELOPMENTS

- 11.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 11.2 Acquisitions & Mergers
- 11.3 New Product Launch
- 11.4 Expansions
- 11.5 Other Key Strategies

12 COMPANY PROFILING

- 12.1 John Deere
- 12.2 Sierra Wireless
- 12.3 Trimble Inc.
- 12.4 GEA Group
- 12.5 AGCO Corporation
- 12.6 Fasal
- 12.7 Raven Industries
- 12.8 Farmers Edge
- 12.9 IBM Corporation
- 12.10 Valarm

- 12.11 Cisco Systems Inc.
- 12.12 Cropin
- 12.13 Microsoft Corporation
- 12.14 Jio Krishi
- 12.15 Topcon Positioning Systems, Inc.

List Of Tables

LIST OF TABLES

Table 1 Global Internet of Things in Farm Management Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Internet of Things in Farm Management Market Outlook, By Component (2024-2032) (\$MN)

Table 3 Global Internet of Things in Farm Management Market Outlook, By Hardware (2024-2032) (\$MN)

Table 4 Global Internet of Things in Farm Management Market Outlook, By Sensors (2024-2032) (\$MN)

Table 5 Global Internet of Things in Farm Management Market Outlook, By GPS devices (2024-2032) (\$MN)

Table 6 Global Internet of Things in Farm Management Market Outlook, By Drones/UAVs (2024-2032) (\$MN)

Table 7 Global Internet of Things in Farm Management Market Outlook, By Cameras (2024-2032) (\$MN)

Table 8 Global Internet of Things in Farm Management Market Outlook, By RFID tags (2024-2032) (\$MN)

Table 9 Global Internet of Things in Farm Management Market Outlook, By Actuators (2024-2032) (\$MN)

Table 10 Global Internet of Things in Farm Management Market Outlook, By Smart irrigation controllers (2024-2032) (\$MN)

Table 11 Global Internet of Things in Farm Management Market Outlook, By Software (2024-2032) (\$MN)

Table 12 Global Internet of Things in Farm Management Market Outlook, By Farm Management Software (2024-2032) (\$MN)

Table 13 Global Internet of Things in Farm Management Market Outlook, By Data analytics platforms (2024-2032) (\$MN)

Table 14 Global Internet of Things in Farm Management Market Outlook, By AI and ML-based decision support tools (2024-2032) (\$MN)

Table 15 Global Internet of Things in Farm Management Market Outlook, By Cloud computing solutions (2024-2032) (\$MN)

Table 16 Global Internet of Things in Farm Management Market Outlook, By Services (2024-2032) (\$MN)

Table 17 Global Internet of Things in Farm Management Market Outlook, By Managed Services (2024-2032) (\$MN)

Table 18 Global Internet of Things in Farm Management Market Outlook, By

Professional Services (2024-2032) (\$MN)

Table 19 Global Internet of Things in Farm Management Market Outlook, By Data Services (2024-2032) (\$MN)

Table 20 Global Internet of Things in Farm Management Market Outlook, By Consulting and integration services (2024-2032) (\$MN)

Table 21 Global Internet of Things in Farm Management Market Outlook, By Maintenance & support services (2024-2032) (\$MN)

Table 22 Global Internet of Things in Farm Management Market Outlook, By Farm Type (2024-2032) (\$MN)

Table 23 Global Internet of Things in Farm Management Market Outlook, By Small & Medium Farms (2024-2032) (\$MN)

Table 24 Global Internet of Things in Farm Management Market Outlook, By Large Commercial Farms (2024-2032) (\$MN)

Table 25 Global Internet of Things in Farm Management Market Outlook, By Deployment Model (2024-2032) (\$MN)

Table 26 Global Internet of Things in Farm Management Market Outlook, By On-Premises (2024-2032) (\$MN)

Table 27 Global Internet of Things in Farm Management Market Outlook, By Cloud-Based (2024-2032) (\$MN)

Table 28 Global Internet of Things in Farm Management Market Outlook, By Connectivity Technology (2024-2032) (\$MN)

Table 29 Global Internet of Things in Farm Management Market Outlook, By Cellular (3G/4G/5G) (2024-2032) (\$MN)

Table 30 Global Internet of Things in Farm Management Market Outlook, By Satellite Communication (2024-2032) (\$MN)

Table 31 Global Internet of Things in Farm Management Market Outlook, By LPWAN (LoRa, NB-IoT, Sigfox) (2024-2032) (\$MN)

Table 32 Global Internet of Things in Farm Management Market Outlook, By Zigbee (2024-2032) (\$MN)

Table 33 Global Internet of Things in Farm Management Market Outlook, By Wi-Fi (2024-2032) (\$MN)

Table 34 Global Internet of Things in Farm Management Market Outlook, By Bluetooth (2024-2032) (\$MN)

Table 35 Global Internet of Things in Farm Management Market Outlook, By Application (2024-2032) (\$MN)

Table 36 Global Internet of Things in Farm Management Market Outlook, By Precision Farming (2024-2032) (\$MN)

Table 37 Global Internet of Things in Farm Management Market Outlook, By Livestock Monitoring (2024-2032) (\$MN)

Table 38 Global Internet of Things in Farm Management Market Outlook, By Smart Greenhouses (2024-2032) (\$MN)

Table 39 Global Internet of Things in Farm Management Market Outlook, By Irrigation Management (2024-2032) (\$MN)

Table 40 Global Internet of Things in Farm Management Market Outlook, By Drone-based Crop Monitoring (2024-2032) (\$MN)

Table 41 Global Internet of Things in Farm Management Market Outlook, By Farm Machinery Management (2024-2032) (\$MN)

Table 42 Global Internet of Things in Farm Management Market Outlook, By Supply Chain & Inventory Management (2024-2032) (\$MN)

Table 43 Global Internet of Things in Farm Management Market Outlook, By Other Applications (2024-2032) (\$MN)

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

I would like to order

Product name: Internet of Things in Farm Management Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software, and Services), Farm Size, Deployment Model, Connectivity Technology, Application and By Geography

Product link: <https://marketpublishers.com/r/I09E8DB2D3BEEN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/I09E8DB2D3BEEN.html>