

Smart Irrigation Technologies Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software, and Services), System Type (Weather-Based Controller Systems, Sensor-Based Controller Systems: Soil, and Hybrid-Based Systems), Irrigation Type, Application, and By Geography

<https://marketpublishers.com/r/SED389BCC056EN.html>

Date: April 2025

Pages: 200

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

ID: SED389BCC056EN

Abstracts

According to Statistics MRC, the Global Smart Irrigation Technologies Market is accounted for \$2.5 billion in 2025 and is expected to reach \$6.5 billion by 2032, growing at a CAGR of 14.8% during the forecast period. Smart irrigation technologies integrate soil moisture sensors, weather forecasting, automated controllers, drip and micro-irrigation systems, and decision-support software to apply water precisely based on crop needs. The solutions conserve water, increase yields, and support sustainability and regulatory compliance. Market expansion is driven by water scarcity, agricultural modernization, and precision-farming incentives.

According to the International Water Management Institute (IWMI), implementation of smart irrigation technologies, such as automated drip systems and soil moisture sensors, can reduce water usage in agriculture by up to 30%, helping to conserve water resources in regions facing drought.

Market Dynamics:

Driver:

Improved sensor, IoT and analytics tech enabling precise scheduling

Advances in low-cost soil moisture and weather sensors, robust wireless IoT nodes and cloud analytics now allow irrigation decisions to be based on real-time field conditions instead of fixed calendars. This precision reduces water usage, improves crop health and lowers energy costs while enabling predictive alerts, remote control and automated fertigation. Furthermore, easy mobile interfaces and integration with farm management systems accelerate adoption among commercial growers and progressive smallholders, creating measurable savings and improved yields.

Restraint:

Limited service networks in emerging markets

Adoption of smart irrigation is frequently constrained by weak local service ecosystems: limited technician availability, scarce spare-parts supply chains and few qualified integrators hamper installation and upkeep. When sensors or controllers fail, long repair delays erode farmer confidence and raise perceived risk for higher-value purchases. Additionally, fragmented distribution and insufficient after-sales support increase total cost of ownership and slow replacement cycles. Until service infrastructures and local training scale up, these practical barriers will limit penetration outside well-served commercial and peri-urban areas.

Opportunity:

Rapid growth of sensor-based systems

Adoption of smart irrigation is frequently constrained by weak local service ecosystems: limited technician availability, scarce spare-parts supply chains and few qualified integrators hamper installation and upkeep. When sensors or controllers fail, long repair delays erode farmer confidence and raise perceived risk for higher-value purchases. Additionally, fragmented distribution and insufficient after-sales support increase total cost of ownership and slow replacement cycles. Until service infrastructures and local training scale up, these practical barriers will limit penetration outside well-served commercial and peri-urban areas.

Threat:

Competition from lower-cost alternatives

In price-sensitive regions growers often prefer basic drip kits, gravity-fed surface

systems or locally produced controllers because they are easier to repair and require less specialised support. Subsidy programs and extension services that emphasise low-cost interventions can also blunt demand for premium smart systems. Consequently, vendors risk losing market share to simpler, cheaper options unless they demonstrate clear return on investment, ensure easy maintenance and offer locally appropriate service and pricing.

Covid-19 Impact:

The pandemic disrupted supply chains and field services while accelerating digital adoption as labour shortages and movement restrictions pushed growers toward remote monitoring and automation. Emergency procurement of sensors and controllers increased, training and extension moved online, and growers grew familiar with remote diagnostics and analytics. Short-term challenges included delayed installations and logistics constraints; however, the overall effect was to heighten awareness and long-term demand for resilient, technology-enabled irrigation practices that reduce labour dependence and improve water management.

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. Physical components such as soil moisture sensors, controllers, valves, flow meters and actuators form the indispensable backbone of smart irrigation systems and therefore drive substantial initial capital expenditure. Hardware revenues benefit from recurring replacement cycles, retrofit demand and large-scale installations for commercial agriculture and municipal landscaping. Moreover, hardware purchases typically trigger complementary software subscriptions, installation services and maintenance contracts, creating integrated and recurring revenue streams that sustain vendor cash flows as systems scale.

The surface irrigation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the surface irrigation segment is predicted to witness the highest growth rate. Surface systems such as furrow and basin irrigation present attractive retrofit opportunities because they cover large areas and often use simpler hydraulics, so low-cost sensor and actuator kits can yield rapid efficiency gains. Farmers can adopt zonal soil-moisture sensing and automated gates without replacing entire infrastructure, delivering tangible water and labour savings. As sensor prices fall

and agronomic advisory services scale, incremental modernization of surface irrigation becomes an economically viable pathway for widespread adoption in extensive crop systems.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share. Strong R&D ecosystems, early commercial adoption of IoT in agriculture, high broadband penetration and strict water-conservation policies underpin regional leadership. Well-established vendors, broad distribution networks and significant municipal and commercial landscaping demand accelerate installations across farms, campuses and municipalities. Additionally, favourable financing and integration with smart-home and enterprise IoT ecosystems facilitate cross-sector adoption, sustaining North America's sizeable revenue contribution to the market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Rapid digitisation, extensive arable land under irrigation, increasing water stress and government programs promoting precision agriculture drive faster uptake. Local manufacturing of affordable sensors, active startup ecosystems and improving mobile connectivity lower adoption barriers for both smallholders and commercial farms. Moreover, public-private partnerships and rising agtech investment accelerate pilot programs and commercial rollouts, producing above-average regional growth compared with mature markets.

Key players in the market

Some of the key players in Smart Irrigation Technologies Market include Netafim Ltd., Rain Bird Corporation, Hunter Industries, Inc., The Toro Company, Jain Irrigation Systems Limited, Rivulis Irrigation Ltd., Valmont Industries, Inc., Lindsay Corporation, HydroPoint Data Systems, Inc., Rachio, Inc., CropX Technologies Ltd., Nelson Irrigation Corporation, Husqvarna Group, Xylem Inc., Arable Labs, Inc., and Sentek Technologies Pty Ltd.

Key Developments:

In October 2025, Rain Bird Corporation, a global leader in the irrigation industry, today announced that it has acquired Rachio, Inc., an innovator and leader in connected

irrigation technology for homeowners. The acquisition represents a significant step forward in Rain Bird's mission to deliver sustainable irrigation solutions and expand the impact of its technologies and services.

In July 2025, The Toro Company launched Lynx Drive new golf irrigation software that integrates with Toro's connected irrigation systems for predictive maintenance and smarter irrigation control.

In March 2025, CropX launched Strato 1 an in-field weather station that provides hyperlocal data feeding into CropX's agronomic platform, improving irrigation decision-making and integration with irrigation systems.

In August 2024, Rivulis introduced Rivulis AI and highlighted other smart-farming tools and partnerships to bring AI and digital decision support to irrigation management.

Components Covered:

Hardware

Software

Services

Systems Types Covered:

Weather-Based Controller Systems

Sensor-Based Controller Systems

Hybrid-Based Systems

Irrigation Types Covered:

Sprinkler Irrigation

Drip Irrigation

Surface Irrigation

Other Irrigation Types

Applications Covered:

Agricultural Irrigation

Non-Agricultural Irrigation

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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