North America Smart Manufacturing - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 120 pages | Mordor Intelligence

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Report description:

North America Smart Manufacturing Market Analysis

The North America smart manufacturing market reached USD 62.21 billion in 2025 and is forecast to attain USD 85.72 billion by 2030, advancing at a 6.62% CAGR. Momentum stems from record federal incentives, strong private-sector capital formation and the tight coupling of artificial intelligence, 5G and cyber-physical systems across discrete and process industries. More than 93% of manufacturers launched new AI initiatives in 2024, a signal that predictive, self-optimizing production environments are moving from pilots to scaled rollouts. Semiconductor reshoring, automotive electrification mandates and battery supply-chain buildouts anchor demand, while pharmaceutical and life-sciences facilities accelerate upgrades to meet stringent compliance requirements. The North America smart manufacturing market is also shaped by shifting workforce dynamics, with skilled-trades attrition and cyber-insurance cost spikes tempering adoption velocity among small and mid-sized enterprises.

North America Smart Manufacturing Market Trends and Insights

Surging Adoption of AI-Enabled Edge Analytics in U.S. Discrete Manufacturing

AI algorithms are now embedded at the machine layer, enabling predictive maintenance that cuts unplanned downtime by up to 60% and extends asset lifespans by 20%. The Clean Energy Smart Manufacturing Innovation Institute broadens access to these tools through workforce programs, helping close data-science skill gaps. Manufacturers view on-site data processing as essential for latency-sensitive applications in automotive and aerospace where millisecond-level responses govern quality.

Rapid Proliferation of 5G-Powered Industrial IoT Networks across Canadian Plants

Private 5G networks eliminate historical connectivity bottlenecks; one U.S. steel facility recorded a 70-fold reduction in operational disruptions and annual savings of USD 2 million after adopting a 5G LAN solution. Manufacturing already accounts for 46% of announced private 5G deployments worldwide. The Canadian Wireless Telecommunications Association forecasts that 5G could cut national emissions by 12.2 MtCO?e by 2025.

Persistent OT Cyber-Insurance Premium Hikes Limiting Digital Conversions

Ransomware incidents affected 65% of manufacturers in 2024, pushing premiums up more than 30% for firms introducing connected assets. Many plants still lack continuous OT monitoring, widening the gap between perceived and actual risk profiles.

Other drivers and restraints analyzed in the detailed report include:

Reshoring Incentives Fueling Digital-First Factories / Sustainability Mandates Driving Smart Energy-Management Retrofits / North American Skilled-Trades Attrition Outpacing Upskilling Pipelines /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Programmable Logic Controllers held 22% revenue in 2024, anchoring the control layer across thousands of plants. The North America smart manufacturing market size for collaborative robotics, however, is projected to rise at an 8.6% CAGR as manufacturers prioritize safe human-robot collaboration. Deployments such as OTTO Motors' Autonomous Mobile Robots deliver 11-month paybacks and shrink work-cell footprints 15% without safety incidents.

Hybrid edge-to-cloud architectures increasingly unite PLCs with AI inference engines. Rockwell Automation and NVIDIA are co-developing reference designs that let operators apply generative AI for quality inspection flows. Machine vision now embeds neural networks for zero-defect assurance, while digital twins inside Product Lifecycle Management tools help test process tweaks virtually before physical execution.

Control hardware accounted for 55% of 2024 spending, yet software and services are forecast to outpace at a 10% CAGR through 2030. Manufacturers increasingly embrace subscription models that bundle analytics, cybersecurity and continuous optimization, reducing time-to-value. Communication infrastructure-especially private 5G and Time-Sensitive Networking Ethernet-underpins this pivot and supports Industrial IoT scalability.

Advanced vision sensors spotlight the transition. Cognex's In-Sight L38 3D system combines AI with dual-mode imaging to accelerate deployment by minimizing training data requirements. Robotics component kits, spanning SCARA to Autonomous Mobile Robots, further elevate flexibility, while MES 4.0 frameworks integrate IT and OT data lakes to slash inventory 30% and lift revenue per employee 75% in automotive trials.

North America Smart Manufacturing Market Share Report is Segmented by Technology (PLC, SCADA and More), Component (Control Devices, Communication Infrastructure, and More), End-User Industry (Automotive, Oil and Gas and More), Deployment Mode (On-Premise, Cloud and More), and Country (United States, Canada). The Market Size and Forecasts are Provided in Terms of Value (USD).

List of Companies Covered in this Report:

ABB Ltd. / Emerson Electric Co. / FANUC Corp. / General Electric Co. / Honeywell International Inc. / Mitsubishi Electric Corp. / Robert Bosch GmbH (Bosch Rexroth) / Rockwell Automation Inc. / Schneider Electric SE / Siemens AG / Texas Instruments Inc. / Yokogawa Electric Corp. / Omron Corp. / PTC Inc. / IBM Corp. / Cisco Systems Inc. / SAP SE / Dassault Systemes SE / Cognex Corp. / Keyence Corp. / Stratasys Ltd. /

Additional Benefits:

The market estimate (ME) sheet in Excel format /
3 months of analyst support /

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