

# **Additive Manufacturing for Industrial Automation Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Material Type, Technology, Application, End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Additive Manufacturing for Industrial Automation Market is accounted for \$4.91 billion in 2025 and is expected to reach \$13.00 billion by 2032 growing at a CAGR of 14.9% during the forecast period. Additive manufacturing is reshaping industrial automation by offering adaptability, precision, and efficiency in production. Using advanced 3D printing methods, manufacturers can produce intricate designs with minimal material use, accelerated prototyping, and greater creative flexibility. This integration enhances automation by cutting downtime, optimizing logistics, and lowering reliance on conventional techniques. Within automated setups, additive manufacturing supports quick, on-demand fabrication of replacement parts and tailored tools, boosting productivity. The synergy of additive manufacturing and automation is creating innovative opportunities, propelling industries toward smarter, leaner, and more sustainable operations.

According to ASTM International, Additive Manufacturing is defined as the process of joining materials to make objects from 3D model data, usually layer upon layer, and is increasingly being standardized through the ASTM F42 Committee. This committee has developed over 30 standards that enable interoperability between AM technologies and industrial automation systems, facilitating scalable deployment across sectors like aerospace, automotive, and medical devices.

Market Dynamics:

### Driver:

#### Cost efficiency and waste reduction

The cost-effectiveness of additive manufacturing is a crucial factor driving its adoption in industrial automation. By using a layer-by-layer approach, it minimizes material waste compared to traditional subtractive techniques, leading to better resource utilization and reduced raw material costs. This sustainable method also cuts down energy usage, creating additional operational savings. Within automated setups, cost benefits are amplified by lowering manual labor needs and minimizing equipment downtime. The technology enables manufacturers to deliver accurate parts with reduced errors, enhancing efficiency. Offering low-cost yet high-quality output, additive manufacturing serves as a vital enabler for industries focusing on efficiency and competitiveness.

### Restraint:

#### High initial investment costs

High setup costs present a critical barrier to the expansion of additive manufacturing in industrial automation. Advanced 3D printing systems, specialized software, and supporting infrastructure require heavy investment, which smaller businesses find difficult to manage. Beyond the purchase price, ongoing maintenance, upgrades, and operator training add extra expenses. These financial demands make adoption challenging for many firms, especially SMEs with limited budgets. Although additive manufacturing promises long-term efficiency and savings, uncertainty around the speed of return on investment makes manufacturers cautious. The steep initial cost therefore slows integration into automated production setups, acting as a major obstacle to market growth.

### Opportunity:

#### Advancements in material science

The evolution of material science is opening significant opportunities for additive manufacturing in industrial automation. Breakthroughs in advanced polymers, composites, and metallic powders are widening the range of 3D-printed applications. Materials with enhanced strength, durability, and conductivity now make it possible to produce functional components for industries with strict performance demands, such as aerospace and automotive. With an increasing variety of affordable and reliable options,

additive manufacturing is becoming more practical for large-scale use. These material innovations not only lower costs but also expand design capabilities, driving broader adoption. Continuous research ensures additive technologies integrate more effectively into automated manufacturing systems.

Threat:

#### Cyber security risks and data theft

Additive manufacturing in industrial automation faces significant cybersecurity threats due to its reliance on digital models and connected networks. Hackers can steal or alter design files, risking intellectual property losses or the creation of defective components. In highly automated settings, such disruptions could interrupt workflows, compromise safety, or damage equipment. These risks weaken confidence in adopting the technology at scale. As industries adopt more interconnected systems under Industry 4.0, vulnerabilities to malware or ransomware increase. Without robust cybersecurity infrastructure and secure data management practices, additive manufacturing remains exposed to risks that could undermine its growth and disrupt automated industrial operations.

Covid-19 Impact:

The impact of COVID-19 on additive manufacturing in industrial automation was both challenging and transformative. During the early stages, disruptions in supply chains and factory closures led to reduced investments and slowed implementation. Yet, the pandemic also showcased the strategic benefits of additive manufacturing, particularly its ability to provide rapid, decentralized, and on-demand production of critical components and medical supplies. This capability helped mitigate shortages and supported continuity in automated processes. Following the crisis, industries began valuing the resilience, flexibility, and efficiency offered by the technology. As a result, the pandemic accelerated long-term adoption, positioning additive manufacturing as a key enabler for future automation.

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 as it provides the core machines and equipment necessary for production. Printers, scanners, and related tools are fundamental to building precise, complex, and efficient components. Automation environments depend on reliable

hardware to integrate smoothly into production lines. Innovations such as multi-material capabilities and faster printing speeds are driving further reliance on advanced hardware solutions. With industries increasingly seeking durable and high-performance systems for large-scale applications in areas like automotive, aerospace, and healthcare, hardware continues to dominate the market, serving as the foundation for technological adoption.

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

Over the forecast period, the composites segment is predicted to witness the highest growth rate because of their unique combination of properties. They offer excellent durability, strength-to-weight ratio, and resistance to harsh conditions, making them valuable for applications in automotive, aerospace, and industrial equipment. In automated settings, composites enable the production of lightweight, robust components that improve performance while lowering energy use. Their flexibility in design also allows the creation of intricate, tailored structures suited to modern manufacturing demands. With ongoing improvements in composite-based printing methods, this segment is expanding rapidly, establishing itself as the fastest-growing area in the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, driven by advanced infrastructure, rapid adoption of new technologies, and the presence of major global players. Significant investments in research and development across sectors such as aerospace, healthcare, and automotive strengthen the region's position. These industries demand highly customized and precise components, which additive manufacturing provides efficiently. Supportive government policies that encourage automation and smart factory adoption also boost growth. The region's early shift toward Industry 4.0, coupled with established manufacturers and innovators, ensures its market leadership. North America continues to dominate, setting the pace for global expansion.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, supported by rapid industrial growth, expanding smart factory initiatives, and favorable government policies. Nations such as China, Japan, South Korea, and India

are accelerating investments in digital and advanced manufacturing technologies. Rising applications in industries like automotive, healthcare, and consumer electronics are increasing reliance on additive solutions within automated setups. Additionally, the presence of cost-effective production hubs, a skilled talent pool, and growing startup ecosystems further strengthen adoption. These factors collectively make Asia-Pacific the most dynamic and rapidly expanding regional market.

### Key players in the market

Some of the key players in Additive Manufacturing for Industrial Automation Market include UPTIVE Advanced Manufacturing, Stratasys, EOS, 3D Systems, Inc., Materialise, Renishaw, Sinterit, Proto Labs, Grenzebach, Siemens Energy, KUKA, AM-Flow, Printinue, Rockwell Automation and ABB.

### Key Developments:

In August 2025, 3D Systems announced it has been awarded a \$7.65 million U.S. Air Force contract for a Large-format Metal 3D Printer Advanced Technology Demonstrator. The award is the next phase of a program 3D Systems has worked on since 2023 that supports the development of large-scale, high-speed, flight relevant additive manufacturing print capabilities.

In August 2025, Eos Energy Enterprises has signed a memorandum of understanding (MoU) with Frontier Power for a 5 gigawatt-hour (GWh) energy storage framework agreement. The partnership marks Eos' entry into the UK market, utilising its zinc-based long-duration energy storage systems.

In February 2025, Renishaw have established a new Renishaw Solutions Centre in Spain. Located within the premises of IDEKO, the new facility forms part of a collaboration agreement signed between the two organisations at the 2024 International Machine Tool Exhibition in Bilbao, Spain.

### Components Covered:

Hardware

Software

Services

### Material Types Covered:

Metals

Polymers

Ceramics

Composites

Photopolymers

Biomaterials

### Technologies Covered:

Fused Deposition Modeling (FDM)

Selective Laser Sintering (SLS)

Stereolithography (SLA)

Direct Metal Laser Sintering (DMLS)

Electron Beam Melting (EBM)

Binder Jetting

Material Jetting

Digital Light Processing (DLP)

Hybrid Additive Manufacturing

### Applications Covered:

Rapid Prototyping

Tooling and Fixtures

End-Use Production Parts

Spare Parts Manufacturing

Mass Customization

Functional Testing

Post-Processing Automation

Quality Inspection Automation

#### End Users Covered:

Automotive

Aerospace & Defense

Electronics & Semiconductors

Industrial Machinery & Equipment

Energy & Utilities

Healthcare & Medical Devices

Consumer Goods

Construction & Architecture

Education & Research Institutions

#### 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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