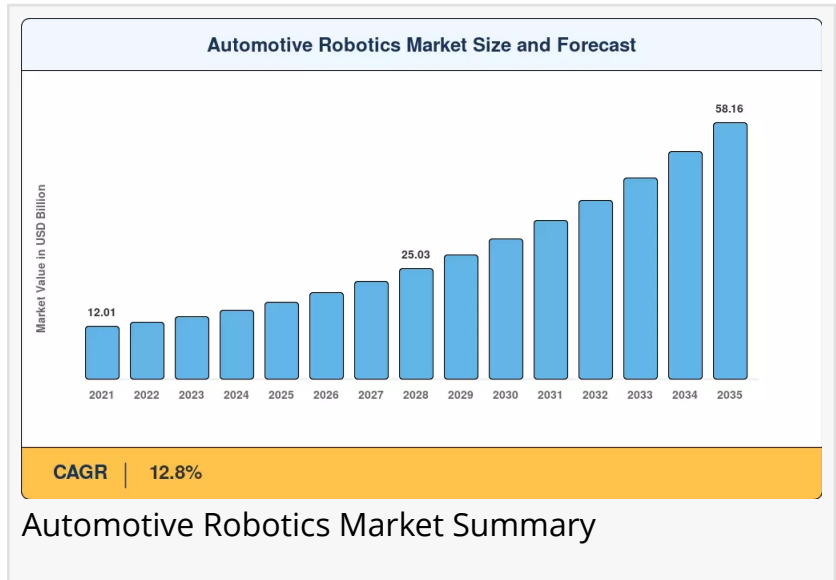


Automotive Robotics Market to Hit USD 58.16 Billion by 2035 at 12.8% CAGR, Driving Technological Advancements

Asia-Pacific commanded the dominant position in the Automotive Robotics Market in 2025, with China alone representing over half of regional robot deployments.

NY, CA, UNITED STATES, July 3, 2026 /EINPresswire.com/ -- The Automotive Robotics Market reached a valuation of USD 17.42 billion in 2025 and is projected to climb from USD 19.67 billion in 2026 to USD 58.16 billion by 2035, expanding at a CAGR of 12.8% across the forecast window.



Automotive Robotics Market Overview

The [automotive robotics market trends](#) encompasses the design, manufacturing, and integration

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of robotic systems specifically deployed in the automotive industry for production, assembly, and quality assurance tasks. These sophisticated machines range from heavy-payload articulated arms for body welding to collaborative robots that work alongside human operators in final assembly. Robotics systems in automotive manufacturing perform a wide spectrum of functions including welding, painting, material handling, assembly, and inspection, providing the precision, speed, and repeatability essential for modern vehicle production. The market includes hardware components such as robotic arms, controllers, and end-effectors, alongside software platforms and

integration services that enable programmable, adaptive automation solutions.

The market is experiencing robust growth driven by two converging forces: the global push toward vehicle electrification—with over 40 countries committing to zero-emission vehicle mandates by 2035—and a structural shortage of skilled manufacturing labor that has made automation an operational necessity rather than a strategic luxury. Battery-electric vehicle production is expected to surpass 30 million units annually by 2030, with every new EV platform requiring dedicated robotic cells for battery-pack insertion, busbar welding, and thermal-management assembly. The International Federation of Robotics recorded 136,000 new industrial robot installations in the automotive sector in 2023 alone, a 9% year-over-year jump signaling broadening adoption beyond premium OEMs into mass-market assembly.

Industry trends indicate a generational technology shift from legacy fixed-sequence robotic cells designed for internal-combustion drivetrain assembly to reprogrammable articulated and collaborative platforms capable of handling EV battery module stacking, e-powertrain mating, and full-body dimensional verification. Modern manufacturing floors are increasingly deploying digital-twin platforms that simulate production scenarios across entire robotic fleets before deploying changes physically, reducing commissioning time by up to 40%. The rise of Robot-as-a-Service business models is eliminating upfront capital barriers, with early programs demonstrating 25–30% faster time-to-production compared with traditional capex procurement.

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Automotive Robotics Market Segmentation

By Product Type

The automotive robotics market is segmented by product type into Articulated Robots, SCARA Robots, Collaborative Robots, and Cartesian Robots. Articulated robots captured a 52.9% revenue share within the market in 2025, reflecting their versatility across body welding, painting, and heavy-payload handling tasks. Their six-axis kinematics accommodate everything from 200 kg body-panel transfers to delicate adhesive dispensing along curved surfaces. Collaborative robots are projected to register a 15.1% CAGR through 2035, as OEMs embed them in flexible final-assembly and quality-inspection stations alongside human operators. SCARA robots represent a significant segment valued at USD 1.92 billion, serving high-speed pick-and-place applications in electronics and small-component assembly. Cartesian robots contribute USD 1.04 billion, providing CNC-style precision in dispensing and sealing applications.

By Function Type

Function type segmentation includes Welding Robots, Painting Robots, Assembly Robots, Material-Handling Robots, and Inspection & Quality-Testing Robots. Welding robots accounted

for the largest functional segment at 43.1% share in 2025, underpinned by rising body-in-white complexity in multi-material EV architectures. Painting robots represent USD 2.53 billion, driven by electrostatic atomization and VOC-reduction compliance requirements. Assembly robots are growing at 13.5% CAGR through 2035, focused on battery-module stacking and e-powertrain integration. Material-handling robots contribute USD 1.85 billion, serving heavy-payload logistics between press shop and body shop. Inspection and quality-testing systems post the fastest functional growth at 13.1% CAGR, reflecting OEM mandates for 100% inline dimensional verification as automakers move from statistical sampling to full-vehicle measurement.

By Component Type

Component type segmentation covers Robotic Arms, Controllers, End-Effectors, and Software & Services. Robotic arms represent the largest component segment with 38.5% share, serving as the core hardware element across all robot types. Controllers are growing at 12.2% CAGR through 2035, driven by edge-AI processing for adaptive motion planning. End-effectors contribute USD 1.61 billion, encompassing application-specific tooling for gripping, welding, and spraying. Software and services represent the fastest-growing component category at 13.4% CAGR, including simulation, analytics, and RaaS subscription platforms as automakers seek to extract value from production data.

By End-User Type

End-user segmentation includes Vehicle Manufacturers (OEMs), Component Manufacturers (Tier-1 and Tier-2), and Service Centers. Vehicle manufacturers account for the largest share at 56.5% in 2025, driven by high-volume production line automation requirements. Component manufacturers are growing at 12.7% CAGR through 2035, as OEM flow-down automation requirements compel Tier-1 and Tier-2 suppliers to invest in robotic capabilities. Service centers represent an emerging segment with 13.0% CAGR, focused on EV battery diagnostics and high-voltage repair automation.

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Automotive Robotics Market Regional Analysis

North America

North America holds the second-largest position in the automotive robotics market at roughly 24% share, buoyed by reshoring incentives under the U.S. Inflation Reduction Act. The United States dominates with 68% of regional share, as automakers such as GM, Ford, and Stellantis commit over USD 100 billion collectively to EV manufacturing through 2030—capital plans that embed substantial robotic cell procurement. Canada shows 12.4% CAGR through 2035, driven by

Ontario EV corridor investment and battery gigafactory commitments from LG Energy Solution and Stellantis. Mexico contributes USD 0.87 billion, benefiting from nearshoring by Asian and European OEMs seeking a balance between automation and cost control.

Europe

Europe represents a mature but growing market with Germany leading at 34% of regional share through OEM retooling for BEV platforms. The UK shows 13.1% CAGR through gigafactory and battery cell investment. France contributes USD 0.61 billion through Renault Group's re-industrialization strategy. Italy shows 11.8% CAGR through Stellantis and Ferrari automation upgrades. Spain contributes USD 0.39 billion through SEAT/CUPRA EV platform launches. The EU's Net-Zero Industry Act and carbon-border adjustment mechanism are accelerating factory-level investments in energy-efficient robotic systems across the bloc. Germany's automotive sector installed more than 26,000 industrial robots in 2023, maintaining the country's position as Europe's largest market by a wide margin.

Asia-Pacific

Asia-Pacific dominates the automotive robotics market with an estimated 42.9% revenue share in 2025. China leads with 56% of regional share, driven by NEV mandates and Made in China 2025 robotics targets. Japan contributes USD 1.78 billion through robot OEM home market and Toyota production system upgrades. India shows 16.2% CAGR through the PLI scheme for automotive and battery manufacturing, with Tata Motors, Mahindra, and international entrants building dedicated EV lines. South Korea contributes USD 1.15 billion through Hyundai-Kia and Samsung SDI automation investment. ASEAN shows 14.9% CAGR through Thailand and Indonesia EV hub strategies.

South America

South America emerges as the fastest-growing region at a 15.6% CAGR through 2035, fueled by greenfield EV assembly plants in Brazil and Argentina. Brazil leads with 62% of regional share through BYD and Stellantis greenfield EV assembly—BYD's Bahia plant alone will deploy over 300 robots at full capacity. Argentina shows 13.8% CAGR through lithium supply chain and battery-pack assembly development. The rest of the region shows early-stage CKD assembly automation growth.

Middle East & Africa

The Middle East & Africa region, valued at USD 0.89 billion in 2025, shows nascent but growing potential. Saudi Arabia leads with 38% of regional share through Vision 2030 automotive localization program, with the Lucid Motors partnership and Ceer joint venture with Foxconn representing flagship investments installing state-of-the-art robotic lines. The UAE shows 14.0% CAGR through free-zone manufacturing and logistics automation. South Africa contributes USD

0.19 billion through BMW and Toyota local assembly upgrades. Egypt shows 13.2% CAGR through government import-substitution incentives.

Competitive Landscape / Key Players

The automotive robotics market exhibits medium concentration, with the top five players accounting for an estimated 45–52% of global revenue. The competitive field spans Japanese and European incumbents with decades of automotive-line expertise, alongside newer entrants—particularly collaborative-robot specialists and Chinese domestic manufacturers—that are compressing price points and expanding addressable applications. Mergers, strategic partnerships, and software-platform investments are the primary competitive levers in the current cycle.

Key companies operating in this market include FANUC Corporation, ABB Ltd, KUKA AG, Yaskawa Electric Corporation, Kawasaki Heavy Industries, Denso Corporation, Nachi-Fujikoshi Corporation, Comau S.p.A., Stäubli International AG, and Universal Robots (Teradyne). FANUC leads with an estimated 10–14% revenue share, offering CRX cobots and R-2000 heavy-payload arms with the largest installed base and vertically integrated servo and CNC manufacturing. ABB holds 9–12% share with its IRB series and OmniCore controllers, maintaining strong European OEM relationships. KUKA commands 8–11% share with its KR QUANTEC series and deep Volkswagen Group partnership, growing Chinese domestic share via Midea ownership. Yaskawa captures 7–10% share with price-competitive MOTOMAN arms strong in arc welding and material handling. Universal Robots, as the market-leading cobot brand, is expanding from general industry into automotive final assembly with its UR20/UR30 models.

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Latest Industry News & Developments

In a significant product launch, FANUC Corporation introduced the CRX-25iA collaborative robot with a 25 kg payload in March 2025, targeting EV battery-module handling in automotive final assembly. This development reflects the industry's pivot toward higher-capacity cobots capable of handling heavier EV components while maintaining collaborative safety features.

ABB Ltd opened a USD 280 million robotics mega-factory in Västerås, Sweden, in January 2025, doubling European production capacity for articulated and collaborative arms. This investment represents one of the largest robotics manufacturing facilities in Europe and positions ABB to meet surging demand from automotive OEMs transitioning to electric vehicle production.

KUKA AG secured a multi-year contract with a leading German OEM in October 2024 to supply over 2,000 KR QUANTEC robots for a new BEV-dedicated body shop in Lower Saxony. This

contract demonstrates the scale of robotic investment required for dedicated electric vehicle production lines.

Hyundai Motor Group partnered with Boston Dynamics in August 2024 to pilot autonomous mobile robots for material conveyance between the body shop and paint shop at its Ulsan complex. This collaboration signals the convergence of traditional industrial robotics with next-generation autonomous mobility technology.

Universal Robots released the UR30 cobot in June 2024—its highest-payload model—enabling automotive Tier-1 suppliers to automate machine tending and palletizing without safety fencing. The launch expands the addressable applications for collaborative robotics in automotive manufacturing.

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Larry Wilson

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