

Industrial Robot Battery Global Market Report 2025 | Business Growth, Development Factors, Current and Future Trends

*The Business Research Company's
Industrial Robot Battery Global Market
Report 2025 – Market Size, Trends, And
Forecast 2025-2034*

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KINGDOM, December 1, 2025
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Industrial Robot Battery Market
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The market size for industrial robot batteries has seen a swift expansion in recent years. The upsurge will see the market jump from \$2.29 billion in 2024 to \$2.58 billion in 2025, with a Compound Annual Growth Rate (CAGR) of 13.0%. The previously witnessed growth can be traced back to the rise in industrial automation, an upswing in the need for robotics in the manufacturing sector, a surge in the acceptance of robots powered by batteries, growth in the electronics and auto sectors, and an amplified focus on operations that are energy-efficient.



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Experts forecast a swift expansion in the industrial robot battery market in the coming years, with its worth projected to reach \$4.16 billion by 2029. This represents a compound annual growth rate (CAGR) of 12.6%. The expansion during the projected period can be linked to a

growing preference for rechargeable and sustainable battery solutions, greater incorporation of autonomous mobile robots, a surge in the demand for high-performance lithium-ion batteries, the proliferation of smart factories and the initiatives of industry 4.0, as well as increasing attention to energy storage optimisation. Key trends expected during the projection period involve progress in battery chemistry, breakthroughs in fast-charging and long-life batteries, the creation of solid-state and next-generation batteries, research and development pursuits in lightweight power systems, and the incorporation of artificial intelligence-based battery management systems.

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What Are The Factors [Driving The Industrial Robot Battery Market?](#)

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Who Are The Major Players In The Industrial Robot Battery Market?

Major players in the Industrial Robot Battery Global Market Report 2025 include:

- TotalEnergies SE
- Tesla Inc.
- BYD Company Limited
- Hitachi Ltd.
- Panasonic Holdings Corporation
- Contemporary Amperex Technology Co. Limited (CATL)
- LG Chem Ltd.
- ABB Ltd.
- Samsung SDI Co. Ltd.
- Wanxiang Group Corporation

What Are The Upcoming Trends Of Industrial Robot Battery Market In The Globe?

Key players in the industrial robot battery market are putting their efforts into designing state-of-the-art battery systems with improved durability, quicker charging speed, and heightened energy efficiency. These enhancements are crucial in fulfilling the surge in demand for automation across various industries and ensuring uninterrupted robotic operations. A standout feature of these batteries is their fast-charging capacity, which allows for quick power restoration through efficient energy transfer, without trading off safety or performance quality. For instance, Electrovaya Inc, a renowned battery technology company based in Canada, in July 2025 unveiled a series of new battery system products designed for robotic vehicle platforms. Developed in collaboration with three leading OEMs – two from the U.S. and one from Japan, these products offer enhanced utility in areas like material handling and surveillance, providing extended running times, extended life cycles, and efficient wireless charging for round-the-clock

operations. ElectroVaya aims to make a mark in the burgeoning robotics market by capitalizing on its specialization in battery safety, longevity, and performance. Shipping of these products will commence in 2025, with a predicted business expansion by the fiscal year 2026 to cater to the anticipated rise in demand fueled by AI-based automation.

Which Segment Accounted For The Largest Industrial Robot Battery Market Share?

The industrial robot battery market covered in this report is segmented –

- 1) By Battery Type: Lithium-Ion Batteries, Nickel-Metal Hydride Batteries, Lead-Acid Batteries, Sodium-Ion Batteries, Other Battery Types
- 2) By Robot Type: Articulated Robots, Selective Compliance Articulated Robot Arm (SCARA) Robots, Delta Robots, Collaborative Robots (Cobots), Mobile Robots
- 3) By Capacity: Below 1,000 mAh, 1,000 mAh - 5,000 mAh, 5,000 mAh - 10,000 mAh, Above 10,000 mAh
- 4) By Application: Welding, Material Handling, Painting, Palletizing, Inspection And Quality Control
- 5) By End-Use Industry: Manufacturing, Logistics And Warehousing, Automotive, Electronics, Food And Beverage, Healthcare, Aerospace

Subsegments:

- 1) By Lithium-Ion Batteries: Nickel Manganese Cobalt (NMC), Lithium Iron Phosphate (LFP Or LiFePO₄), Nickel Cobalt Aluminum (NCA), Lithium Titanate Oxide (LTO), High-Energy Cells, High-Power Cells, Cylindrical Cells, Prismatic Cells, Pouch Cells, Module-Level (Pack) Configurations
- 2) By Nickel-Metal Hydride Batteries (NiMH): Standard (AA Or AAA style) Cylindrical Cells, Prismatic Industrial Cells, High-Capacity NiMH, Low-Self-Discharge NiMH, Hybrid Or Rapid-Charge NiMH, Module Or Pack Assemblies
- 3) By Lead-Acid Batteries: Flooded (Wet) Lead-Acid, Valve Regulated Lead-Acid (VRLA), Absorbent Glass Mat (AGM), Gel Lead-Acid, Enhanced Flooded Battery (EFB), Tubular Or OpzS Deep-Cycle, Starter Batteries, Deep-Cycle Industrial Packs
- 4) By Sodium-Ion Batteries: Layered-Oxide Cathode Sodium-Ion, Polyanionic (NASICON-Type) Sodium-Ion, Prussian-Blue Analogue Cathode, Aqueous Sodium-Ion, Solid-State Sodium-Ion, Cylindrical Or Prismatic Or Pouch Formats, Cell-Level And Pack-Level Configurations
- 5) By Other Battery Types: Lithium-Sulfur (Li-S), Solid-State Batteries, Flow Batteries, Zinc-ion Or Zinc-Air, Aluminum-Ion, Metal-Air, Supercapacitors Or Ultracapacitors, Fuel-Cell (Hydrogen) Hybrid Modules

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What Are The Regional Trends In The Industrial Robot Battery Market?

In 2024, North America was the leading region in the global industrial robot battery market. However, Asia-Pacific is anticipated to experience the most rapid growth in the upcoming time

frame. The report covers the following regions: Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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