

Battery Swapping Market by Station Type (Automated and Manual), Service Type, Application (Passenger and Commercial), Battery capacity, Vehicle Type (2-wheeler, 3-wheeler, 4-wheeler), Application and Region - Global Forecast to 2027

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Abstracts

The battery swapping market is projected to grow from USD 1.7 Billion in 2022 to USD 11.8 Billion by 2027, at a CAGR of 46.9% during the forecast period.

By solving problems like the high cost of ownership, lengthy battery charging times, and range anxiety of EVs, battery swapping can address the majority of the shortcomings that deter normal consumers from purchasing EVs. There are 2 kinds of battery swapping stations that are mapped, manual and automated. In automated swapping station there is new technological trend known as modular swapping stations which include swapping through modular batteries and resolves issue of battery standardization for instance: An Ample EV battery is made from Lego-like battery modules, these batteries have capability to accommodate any make, design, model or driving profile. Another example CATL's subsidiary CAES launched out EVOGO, which is an innovative modular battery swap solution, this solution includes battery blocks, an app, and fast battery swap stations. CAES solution to the issue related to battery swapping, is based on the separation of vehicle and battery, The company consider battery as a externally shared product, this is creating a whole new experience for the market. "Choco-SEB (swapping electric block)" looks like a bar of chocolate is a mass-produced battery specially evolved for EV battery-swapping. The Choco-SEB boosts the advantages of high-energy density and offers benefits of small size, flexible combination with minimalist design.

"4-wheeler battery swapping market is expected to grow at high CAGR ."

Increasing concerns about vehicle emissions and the rising prices of petrol have pushed OEMs to develop various types of electric vehicles (EVs). These EVs have different specifications and varying battery capacity, range, acceleration, and top speed along with features such as infotainment and IoT. The motor and drive specifications also vary from one vehicle model to another

IoT and CAN (controller area network) that are present in battery swap systems enable continuous tracking and monitoring of battery performance through data analytics. This information is used by BSOs to calculate the current demand and arrange their swap stations' battery inventories most efficiently. With this knowledge, they will be able to entice customers to drop off used batteries at more convenient swap locations. The BSOs can use IoT to observe driver behavior and identify driving trends that affect the battery's rate of discharge.

Manual battery swapping is estimated to be the largest market for battery swapping by station type

In manual swapping stations, the batteries are manually inserted into and removed from the charging source. Unlike other types of swapping stations, manual swapping stations are modular and take up less space. Due to the smaller size and lighter weight of two- and three-wheeler batteries, these systems are mostly employed for these types of vehicles.

Gogoro, Taiwan, SUN Mobility, and Swobbee are some of the major providers of manual swapping stations. Initiatives like expansions and partnerships between local and major players will increase the demand for battery swapping for two-wheelers, especially in Asian countries. In November 2022, Gogoro announced a B2B partnership with the EV-as-a-Service platform Zypp Electric in India to electrify logistics fleets and last-mile deliveries.

In manual battery swapping, exhausted batteries may be immediately swapped out for fully charged ones. This provides EV users with a nearly identical experience to that of a fossil fuel recharging station. They enable the EV owners to effectively pay a subscription for the battery, separating the cost of the battery from the cost of the vehicle and lowering the cost of the EV.

In-depth interviews were conducted with CEOs, marketing directors, other innovation and strategy directors, and executives from various key organizations operating in this

market.

By Company Type: Battery swapping Provider OEM – 24% Tier I- 67% and Tier II & III- 9%

By Designation: C Level - 33%, Managers- 52%, and Executives – 15%

By Region: Asia Pacific - 38%, Europe - 34%, North America –28%

The battery swapping market is dominated by players such as NIO Power (China), Gogoro(Taiwan), Immotor (China), Aulton (China), and Sun Mobility (India).

Research Coverage:

The study segments the battery swapping market and forecasts the market size based on Application, Service type, station type, battery capacity, vehicle type and Region

The study also includes an in-depth competitive analysis of the major battery swapping providers in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

Key Benefits of Buying the Report:

The report will help the market leaders/new entrants in this market with the information on the closest approximations of the revenue numbers for the overall battery swapping market and the sub-segments.

This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies.

The report also helps stakeholders understand the market's pulse and provides them information on key market drivers, restraints, challenges, and opportunities.

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