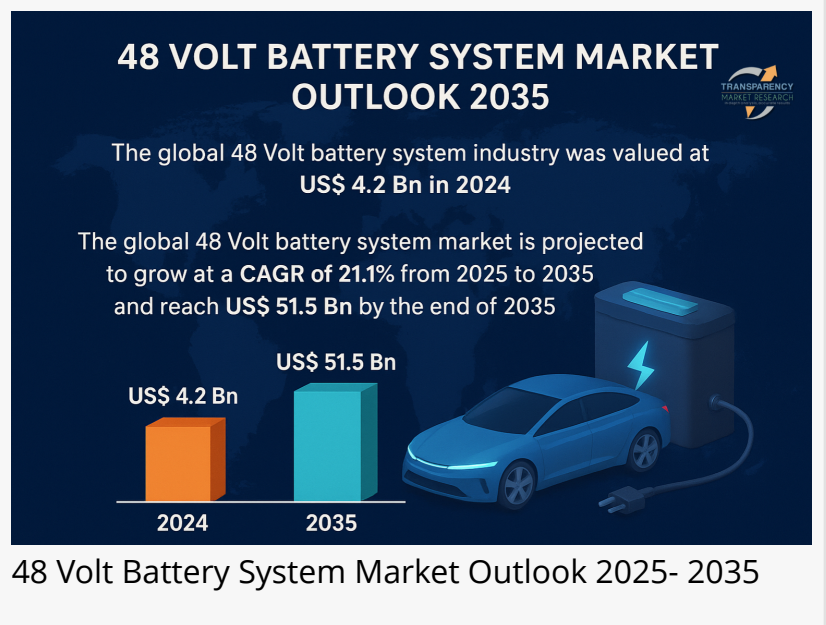


# 48 Volt Battery System Market Size Forecast to USD 51.5 Billion by 2035 with a Focus on Hybrid Vehicles – Report by TMR

*Global 48 Volt Battery System Market to Reach USD 51.5 Billion by 2035, Growing at 21.1% CAGR – Transparency Market Research*

WILMINGTON, DE, UNITED STATES,  
September 30, 2025 /  
EINPresswire.com/ -- 48 Volt Battery  
System Market Outlook 2035

The global [48 Volt battery system industry](#) is witnessing rapid adoption, driven by the transition toward hybrid and electric vehicles, rising demand for fuel efficiency, and the push for reduced carbon emissions. In 2024, the market was valued at US\$ 4.2 Bn. Looking ahead, the global 48 Volt battery system market is projected to grow at a remarkable CAGR of 21.1% from 2025 to 2035 and reach nearly US\$ 51.5 Bn by 2035.



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Surging Demand for EVs to Drive 48 Volt Battery System Market to USD 51.5 Billion by 2035”

*Latest Report by Transparency Market Research, Inc.*

The strong momentum reflects the growing penetration of mild hybrid vehicles, expanding electrification of automotive powertrains, and increasing integration of advanced energy storage solutions in both passenger and commercial vehicles.

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Analysts' Viewpoint on the 48 Volt Battery System Market

Analysts note that 48 Volt systems are increasingly becoming the “sweet spot” for automakers—offering a balance between efficiency, performance, and cost. Unlike high-voltage EV systems, 48 Volt batteries enable smoother hybridization at lower costs, making them attractive for mass-market adoption.

The market outlook remains promising as leading automakers integrate 48 Volt solutions into new vehicle platforms to comply with stringent emission norms. Beyond automotive, industrial equipment and renewable energy storage sectors are also expected to contribute to future demand.

## 48 Volt Battery System Market Overview

A 48 Volt battery system is a mid-voltage energy storage solution designed to power auxiliary systems, boost engine efficiency, and reduce fuel consumption in vehicles. It supports regenerative braking, start-stop functionality, and hybrid driving modes without the cost burden of full EV systems.

### Key Applications Include:

- Mild Hybrid Electric Vehicles (MHEVs) – Improving fuel economy and lowering CO<sub>2</sub> emissions.
- Passenger Cars – Enhancing performance and enabling advanced features.
- Commercial Vehicles – Supporting electrification of delivery vans, trucks, and buses.
- Industrial Equipment – Forklifts, construction, and material-handling applications.
- Renewable Energy Storage – Secondary applications in grid and off-grid solutions.

### Analysis of Key Players in the 48 Volt Battery System Market

Leading companies in the 48 Volt battery system market are actively pursuing strategies to strengthen their market position and address growing demand for advanced vehicle electrification. Key initiatives include the launch of next-generation 48V mild hybrid systems, partnerships with component suppliers for cost-efficient system integration, and the expansion of MHEV offerings across multiple vehicle categories. In addition, investments in modular platforms are enabling faster, more scalable deployments across global automotive markets.

### Prominent players in this market include

- A123 Systems LLC
- American Battery Solutions Inc.
- BorgWarner Inc.
- Continental AG
- Delphi technologies
- East Penn Manufacturing Company
- EnerSys
- EVE Energy Co., Ltd.
- GS Yuasa Corporation

- Hitachi, Ltd.
- Johnson Controls International Plc
- Lear Corporation
- MAHLE Powertrain Ltd
- PowerTech Systems
- Robert Bosch GmbH
- SEALED ENERGY SYSTEMS
- Valeo SA
- Vicor Corporation
- ZF Friedrichshafen AG

Each of these players has been profiled in the 48 Volt battery system market research report based on parameters such as company overview, financial performance, business strategies, product portfolio, business segments, and recent developments.

#### Key Developments in the 48 Volt Battery System Market

- June 2025 – SAE International published an in-depth article highlighting the industry's rapid shift from conventional 12V vehicle architectures to advanced 48V zonal power systems. The report emphasized how OEMs are adopting 48V systems to meet the rising power requirements of ADAS, infotainment, and comfort features, while also benefiting from higher efficiency, lower current draw, and reduced system weight. Importantly, it noted that 48V architectures are not limited to EVs—OEMs are also deploying them in ICE and hybrid vehicles to overcome the constraints of traditional 12V alternators. Advances in miniaturized DC-DC converters and phased zonal adoption strategies are enabling automakers to scale implementation based on engineering readiness and validation timelines.
- December 2024 – Valeo unveiled its latest 48V mild hybrid system, designed as a more economical and energy-efficient solution for vehicle electrification. The system is available in two tiers: a cost-effective option for fuel savings and torque assist, and an enabling tier that supports 100% electric propulsion. Valeo's 48V design reduces costs by approximately 20% compared to conventional high-voltage hybrids, thanks to optimized safety and architectural simplifications. The company also introduced groundbreaking products, including the first-ever 48V plug-in hybrid vehicles with an 80 km electric range, and a 100% electric 48V prototype tailored for low-cost, urban mobility with simplified charging infrastructure. The first deployment took place in the Citroën AMI, showcasing Valeo's commitment to democratizing affordable electrification.

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#### Key Growth Drivers

1. Shift Toward Hybridization – Growing demand for MHEVs as a cost-efficient alternative to

EVs.

2. Stringent Emission Regulations – 48 Volt systems help automakers comply with CO<sub>2</sub> reduction mandates.
3. Improved Fuel Efficiency – Enhances mileage while lowering operating costs.
4. Automotive OEM Adoption – Increasing integration of 48 Volt solutions across global platforms.
5. Technological Advancements – Innovations in lithium-ion chemistry and battery management systems.

## Market Restraints & Challenges

- High Initial Costs – Compared with traditional 12V systems.
- Limited Energy Density – Not suitable for long-range full-electric applications.
- Infrastructure Gaps – Requires OEM standardization and wider industry adoption.
- Competition from High-Voltage EV Systems – Growing popularity of BEVs may limit uptake in some markets.

## Market Segmentation

### By Battery Type

- Lithium-Ion
- Lead-Acid
- Others

### By Vehicle Type

- Passenger Cars
- Light Commercial Vehicles (LCVs)
- Heavy Commercial Vehicles (HCVs)

### By End Use

- Automotive
- Industrial
- Renewable Energy

### By Region

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East & Africa

## Market Trends & Innovations

1. OEM Collaborations – Partnerships between automakers and battery suppliers.
2. Integration with Advanced Driver Assistance Systems (ADAS) – Powering next-gen electronics.
3. Rise of Lithium-Ion Dominance – Superior performance over traditional lead-acid batteries.
4. Scalable Platforms – Modular battery packs for multiple applications.
5. Circular Economy Initiatives – Recycling and reuse of 48V batteries gaining traction.

## Future Outlook

The global 48 Volt battery system market is poised to surpass US\$ 51.5 Bn by 2035, fueled by the electrification wave across the automotive sector. With cost-effective hybridization, supportive regulations, and strong OEM adoption, 48 Volt systems are expected to remain a cornerstone of sustainable mobility solutions.

## Key Future Insights:

- Broader integration in passenger cars and commercial vehicles.
- Advancements in solid-state and next-gen lithium-ion technologies.
- Expansion into non-automotive sectors such as industrial machinery.
- Strategic OEM-supplier partnerships driving faster adoption.

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## Important FAQs

Q1. What was the market size of the 48 Volt battery system industry in 2024?

A1. The market was valued at US\$ 4.2 Bn.

Q2. What is the projected market size by 2035?

A2. The market is expected to reach US\$ 51.5 Bn.

Q3. What is the CAGR for 2025–2035?

A3. The market will expand at a CAGR of 21.1%.

Q4. What are the major applications of 48 Volt battery systems?

A4. Mild hybrid vehicles, passenger cars, commercial vehicles, industrial equipment, and renewable energy storage.

Q5. Who are the leading players in the market?

A5. Bosch, Continental, Valeo, Johnson Controls, LG Energy Solution, Panasonic, Samsung SDI, and others.

Q6. What trends will shape the future of the industry?

A6. OEM collaborations, lithium-ion dominance, ADAS integration, modular battery packs, and circular economy practices.

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