

# **Battery Management IC Market Forecasts to 2032 – Global Analysis By Type (Battery Charger IC, Fuel Gauge IC, Battery Protection IC, Cell Balancing IC and Battery Monitor IC), Battery Type, Topology, Application, End User and By Geography**

<https://marketpublishers.com/r/BD1961CB20F2EN.html>

Date: June 2025

Pages: 150

Price: US\$ 4,150.00 (Single User License)

ID: BD1961CB20F2EN

## **Abstracts**

According to Statistics MRC, the Global Battery Management IC Market is accounted for \$8.9 billion in 2025 and is expected to reach \$14.6 billion by 2032 growing at a CAGR of 7.4% during the forecast period. A Battery Management Integrated Circuit (Battery Management IC) is a specialized electronic component designed to monitor, control, and optimize the performance and safety of rechargeable battery systems. It plays a critical role in managing key functions such as charge and discharge regulation, cell balancing, temperature monitoring, and state-of-charge estimation. Battery Management ICs are widely used in devices such as smartphones, electric vehicles, medical equipment, and energy storage systems. By preventing overcharging, deep discharging, and overheating, these ICs enhance battery lifespan, safety, and efficiency. They are essential for ensuring reliable power delivery and optimal operation in battery-powered electronic applications.

According to the International Energy Agency (IEA), the global electric vehicle stock in 2023 will be 3 million, up 40% from 2021.

Market Dynamics:

Driver:

Rising Demand for Electric Vehicles (EVs)

The rising demand for electric vehicles (EVs) is significantly driving the growth of the Battery Management IC market. As EV adoption accelerates globally, the need for efficient, reliable, and safe battery systems becomes crucial. Battery Management ICs play a vital role in monitoring, protecting, and optimizing battery performance, ensuring longevity and safety. With government incentives, environmental concerns, and advancements in EV technology fueling market expansion, manufacturers are increasingly investing in smart battery management solutions, boosting the demand for advanced ICs.

Restraint:

#### High Design Complexity

High design complexity significantly hinders the growth of the Battery Management IC (BMIC) market. Complex architectures increase development time, raise costs, and demand specialized expertise, limiting the entry of new players. It also complicates integration with diverse battery chemistries and system platforms, slowing product development cycles. This hampers scalability and innovation, making it challenging for manufacturers to meet evolving performance and safety requirements, thereby restricting market expansion and adoption.

Opportunity:

#### Advancements in Battery Technology

Advancements in battery technology are positively driving the Battery Management IC market by enabling more efficient, compact, and high-capacity energy storage solutions. Innovations such as solid-state batteries and lithium-silicon anodes demand precise monitoring and control, increasing the need for advanced battery management ICs. These ICs ensure safety, longevity, and optimal performance of cutting-edge batteries used in electric vehicles, portable electronics, and renewable energy systems. As battery technologies evolve, they unlock new applications, fueling growth and innovation in the Battery Management IC market.

Threat:

#### High Development Costs

High development costs pose a significant barrier to the growth of the Battery

Management IC market. The need for advanced technologies, specialized design, and rigorous testing increases overall R&D expenditures. These high upfront investments deter new entrants and strain smaller companies, limiting innovation and market expansion. Consequently, only a few established players dominate, which hampers competitive pricing, slows product diversification, and restricts the broader adoption of battery management solutions.

### Covid-19 Impact

The Covid-19 pandemic initially disrupted the Battery Management IC (BMIC) market due to global supply chain interruptions, manufacturing halts, and reduced demand across automotive and industrial sectors. However, the crisis also accelerated digital transformation and the adoption of battery-powered medical and consumer electronics, driving renewed demand for BMICs. As economies recovered, increased focus on electric mobility and energy storage further supported the market's rebound and long-term growth prospects.

The medical devices segment is expected to be the largest during the forecast period

The medical devices segment is expected to account for the largest market share during the forecast period, due to the increasing demand for portable, battery-powered medical equipment such as wearable monitors, infusion pumps, and implantable devices. These applications require highly reliable and efficient power management to ensure safety and continuous operation. BMICs provide accurate battery monitoring, longer battery life, and enhanced safety features, making them essential in critical healthcare applications. This rising integration boosts demand for advanced BMIC solutions, fueling market expansion.

The cell balancing IC segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the cell balancing IC segment is predicted to witness the highest growth rate as it enhances battery efficiency, lifespan, and safety. These ICs ensure uniform charge distribution across all cells, preventing overcharging or undercharging, which improves battery performance in electric vehicles, renewable energy storage, and consumer electronics. With the growing adoption of high-capacity lithium-ion batteries, demand for advanced cell balancing solutions is rising, driving innovation and accelerating the growth of the overall BMIC market across various industries.

### Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to demand for electric vehicles, renewable energy systems, and consumer electronics. Countries like China, Japan, and South Korea are leading in EV production and battery manufacturing, fostering robust demand for advanced battery management solutions. Government initiatives supporting clean energy and investments in smart grid infrastructure further enhance market potential. The region's strong electronics manufacturing ecosystem also accelerates adoption, positioning Asia Pacific as a key growth hub.

### Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to rising adoption of electric vehicles (EVs), increasing demand for energy storage systems, and the region's strong focus on renewable energy integration. Technological advancements and government incentives supporting clean energy solutions further fuel market expansion. Additionally, the presence of leading semiconductor companies and increasing investments in smart grid infrastructure enhance the demand for battery management ICs, positioning North America as a key contributor to the global market growth.

### Key players in the market

Some of the key players profiled in the Battery Management IC Market include Texas Instruments, Analog Devices, NXP Semiconductors, STMicroelectronics, ON Semiconductor, Renesas Electronics, Infineon Technologies, Rohm Semiconductor, Microchip Technology, Toshiba Corporation, Samsung Electronics, LG Chem, Panasonic Corporation, Murata Manufacturing, Skyworks Solutions, Qualcomm, MediaTek and Vicor Corporation.

### Key Developments:

In October 2024, Analog Devices has unveiled CodeFusion Studio™ along with an enhanced Developer Portal, aimed at accelerating the development of intelligent-edge applications. Built on the popular open-source Visual Studio Code IDE and augmented by a modern command-line interface, CodeFusion Studio.

In September 2024, Analog Devices (ADI), has entered into a formal strategic alliance with India's Tata Group to strengthen domestic chip manufacturing. Under a Memorandum of Understanding, Tata Electronics, Tata Motors, and Tejas Networks will explore co-manufacturing of ADI's analog and mixed-signal products at two greenfield facilities.

#### Types Covered:

Battery Charger IC

Fuel Gauge IC

Battery Protection IC

Cell Balancing IC

Battery Monitor IC

#### Battery Types Covered:

Lithium-Ion

Lead Acid

Nickel Metal Hydride

Other Battery Types

#### Topologies Covered:

Centralized

Modular

Distributed

### Applications Covered:

Consumer Electronics

Automotive

Industrial

Medical Devices

Renewable Energy Systems

Telecom & Data Centers

Other Applications

### End Users Covered:

Aftermarket

Original Equipment Manufacturers (OEMs)

### 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 2022, 2023, 2024, 2026, and 2030
- 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

## Contents

### **1 EXECUTIVE SUMMARY**

### **2 PREFACE**

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
  - 2.4.1 Data Mining
  - 2.4.2 Data Analysis
  - 2.4.3 Data Validation
  - 2.4.4 Research Approach
- 2.5 Research Sources
  - 2.5.1 Primary Research Sources
  - 2.5.2 Secondary Research Sources
  - 2.5.3 Assumptions

### **3 MARKET TREND ANALYSIS**

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 Emerging Markets
- 3.8 Impact of Covid-19

### **4 PORTERS FIVE FORCE ANALYSIS**

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

### **5 GLOBAL BATTERY MANAGEMENT IC MARKET, BY TYPE**

- 5.1 Introduction
- 5.2 Battery Charger IC
- 5.3 Fuel Gauge IC
- 5.4 Battery Protection IC
- 5.5 Cell Balancing IC
- 5.6 Battery Monitor IC

## **6 GLOBAL BATTERY MANAGEMENT IC MARKET, BY BATTERY TYPE**

- 6.1 Introduction
- 6.2 Lithium-Ion
- 6.3 Lead Acid
- 6.4 Nickel Metal Hydride
- 6.5 Other Battery Types

## **7 GLOBAL BATTERY MANAGEMENT IC MARKET, BY TOPOLOGY**

- 7.1 Introduction
- 7.2 Centralized
- 7.3 Modular
- 7.4 Distributed

## **8 GLOBAL BATTERY MANAGEMENT IC MARKET, BY APPLICATION**

- 8.1 Introduction
- 8.2 Consumer Electronics
- 8.3 Automotive
- 8.4 Industrial
- 8.5 Medical Devices
- 8.6 Renewable Energy Systems
- 8.7 Telecom & Data Centers
- 8.8 Other Applications

## **9 GLOBAL BATTERY MANAGEMENT IC MARKET, BY END USER**

- 9.1 Introduction
- 9.2 Aftermarket
- 9.3 Original Equipment Manufacturers (OEMs)

## **10 GLOBAL BATTERY MANAGEMENT IC MARKET, BY GEOGRAPHY**

### 10.1 Introduction

### 10.2 North America

#### 10.2.1 US

#### 10.2.2 Canada

#### 10.2.3 Mexico

### 10.3 Europe

#### 10.3.1 Germany

#### 10.3.2 UK

#### 10.3.3 Italy

#### 10.3.4 France

#### 10.3.5 Spain

#### 10.3.6 Rest of Europe

### 10.4 Asia Pacific

#### 10.4.1 Japan

#### 10.4.2 China

#### 10.4.3 India

#### 10.4.4 Australia

#### 10.4.5 New Zealand

#### 10.4.6 South Korea

#### 10.4.7 Rest of Asia Pacific

### 10.5 South America

#### 10.5.1 Argentina

#### 10.5.2 Brazil

#### 10.5.3 Chile

#### 10.5.4 Rest of South America

### 10.6 Middle East & Africa

#### 10.6.1 Saudi Arabia

#### 10.6.2 UAE

#### 10.6.3 Qatar

#### 10.6.4 South Africa

#### 10.6.5 Rest of Middle East & Africa

## **11 KEY DEVELOPMENTS**

### 11.1 Agreements, Partnerships, Collaborations and Joint Ventures

### 11.2 Acquisitions & Mergers

- 11.3 New Product Launch
- 11.4 Expansions
- 11.5 Other Key Strategies

## **12 COMPANY PROFILING**

- 12.1 Texas Instruments
- 12.2 Analog Devices
- 12.3 NXP Semiconductors
- 12.4 STMicroelectronics
- 12.5 ON Semiconductor
- 12.6 Renesas Electronics
- 12.7 Infineon Technologies
- 12.8 Rohm Semiconductor
- 12.9 Microchip Technology
- 12.10 Toshiba Corporation
- 12.11 Samsung Electronics
- 12.12 LG Chem
- 12.13 Panasonic Corporation
- 12.14 Murata Manufacturing
- 12.15 Skyworks Solutions
- 12.16 Qualcomm
- 12.17 MediaTek
- 12.18 Vicor Corporation

## List Of Tables

### LIST OF TABLES

Table 1 Global Battery Management IC Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Battery Management IC Market Outlook, By Type (2024-2032) (\$MN)

Table 3 Global Battery Management IC Market Outlook, By Battery Charger IC (2024-2032) (\$MN)

Table 4 Global Battery Management IC Market Outlook, By Fuel Gauge IC (2024-2032) (\$MN)

Table 5 Global Battery Management IC Market Outlook, By Battery Protection IC (2024-2032) (\$MN)

Table 6 Global Battery Management IC Market Outlook, By Cell Balancing IC (2024-2032) (\$MN)

Table 7 Global Battery Management IC Market Outlook, By Battery Monitor IC (2024-2032) (\$MN)

Table 8 Global Battery Management IC Market Outlook, By Battery Type (2024-2032) (\$MN)

Table 9 Global Battery Management IC Market Outlook, By Lithium-Ion (2024-2032) (\$MN)

Table 10 Global Battery Management IC Market Outlook, By Lead Acid (2024-2032) (\$MN)

Table 11 Global Battery Management IC Market Outlook, By Nickel Metal Hydride (2024-2032) (\$MN)

Table 12 Global Battery Management IC Market Outlook, By Other Battery Types (2024-2032) (\$MN)

Table 13 Global Battery Management IC Market Outlook, By Topology (2024-2032) (\$MN)

Table 14 Global Battery Management IC Market Outlook, By Centralized (2024-2032) (\$MN)

Table 15 Global Battery Management IC Market Outlook, By Modular (2024-2032) (\$MN)

Table 16 Global Battery Management IC Market Outlook, By Distributed (2024-2032) (\$MN)

Table 17 Global Battery Management IC Market Outlook, By Application (2024-2032) (\$MN)

Table 18 Global Battery Management IC Market Outlook, By Consumer Electronics (2024-2032) (\$MN)

Table 19 Global Battery Management IC Market Outlook, By Automotive (2024-2032)

(\$MN)

Table 20 Global Battery Management IC Market Outlook, By Industrial (2024-2032)

(\$MN)

Table 21 Global Battery Management IC Market Outlook, By Medical Devices

(2024-2032) (\$MN)

Table 22 Global Battery Management IC Market Outlook, By Renewable Energy  
Systems (2024-2032) (\$MN)

Table 23 Global Battery Management IC Market Outlook, By Telecom & Data Centers  
(2024-2032) (\$MN)

Table 24 Global Battery Management IC Market Outlook, By Other Applications  
(2024-2032) (\$MN)

Table 25 Global Battery Management IC Market Outlook, By End User (2024-2032)  
(\$MN)

Table 26 Global Battery Management IC Market Outlook, By Aftermarket (2024-2032)  
(\$MN)

Table 27 Global Battery Management IC Market Outlook, By Original Equipment  
Manufacturers (OEMs) (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East &  
Africa Regions are also represented in the same manner as above.

## I would like to order

Product name: Battery Management IC Market Forecasts to 2032 – Global Analysis By Type (Battery Charger IC, Fuel Gauge IC, Battery Protection IC, Cell Balancing IC and Battery Monitor IC), Battery Type, Topology, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/BD1961CB20F2EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/BD1961CB20F2EN.html>