



**Global and China Power Battery  
Management System (BMS) Industry  
Report, 2015-2018**

**Jun. 2015**

## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

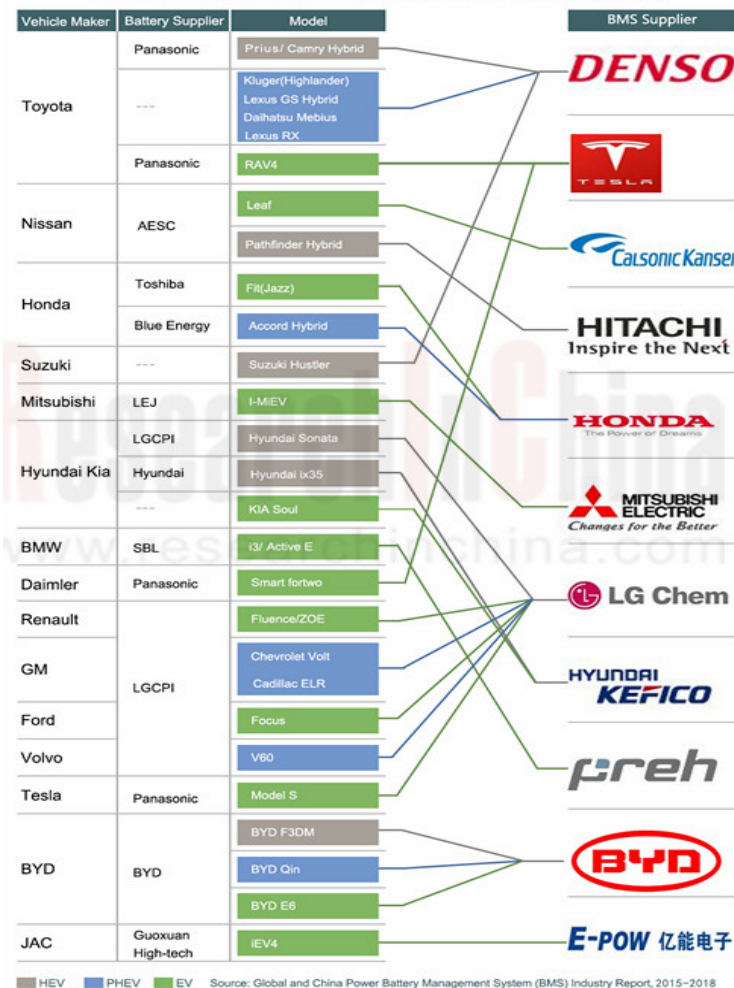
## Abstract

Battery management system (BMS) is a key component of electric vehicles and hybrid vehicles. To ensure safe and reliable operation of batteries, BMS needs to have various functions such as battery status monitoring and assessment, charging and discharging control, balancing and so forth.

The fire accidents of electric vehicles (particularly battery electric vehicles) since 2013 result in consumers' concerns about the safety of electric vehicles. Compared with HEV, both PHEV and BEV have more complex battery system structure, which requires more excellent battery endurance and safety; therefore, PHEV and BEV need more mature and reliable BMS. The BMS industry will benefit from the expansion of the electric vehicle market.

Throughout the global BMS market, traditional auto parts makers represented by Denso and Preh have seized the initiative by virtue of their important positions in the vehicle supply chain. As Toyota's most important parts supplier, Denso has provided battery management modules for Prius, Camry Hybrid and other models. Besides serving BMW I-series BEV, Preh also explores the Chinese market with the help of the resources of its parent company- Ningbo Joyson Electronic Corp.

The World's Main EV/HEV/PHEV Models and BMS Supporting



Source: Global and China Power Battery Management System (BMS) Industry Report, 2015-2018

Cell makers like LGC attempt to, on the basis of cooperation with existing customers, simplify and generalize BMW by gradually narrowing the scope of functionality, and spin off software and data services, which are provided alone to vehicle makers. Among vehicle makers, Tesla has mature and sophisticated BMW, and its next-generation BMS technology will get applied to battery packs with larger single cells. Third-party BMS companies, constrained by outdated technology and inadequate funds, have developed slowly amid hardships.

In the first quarter of 2015, China produced 27,271 and sold 26,581 new energy vehicles, both exceeding the figures in the first half of 2014. It is expected that throughout the year of 2015, China's new energy vehicle capacity will continue to be quickly unleashed, and PHEV and mini BEV will witness faster growth, driving rapid development of the Chinese BMS market.

There are three types of companies in the Chinese BMS market. First type covers third-party BMS vendors, such as Epower Electronics, GuanTuo Power and LIGOO New Energy Technology, of which Epower Electronics entered the industry early, with its BMS products having been installed in multiple EV models of Chang'an, Dongfeng, BAIC Motor, Foton, JAC, and ZOTYE. Second category refers to battery module and pack packaging companies, like Guoxuan High-tech Power Energy and Sunwoda Electronic, which enter the market via independent research and development or cooperation. Third type is vehicle makers represented by BYD and BAIC BJEV, which have relatively perfect layout in the sector, with the former integrating R&D of battery, BMS and EV, thus giving it advantages in terms of cost and efficiency, and the latter boasting research capability for BMS after acquisition of Atieva and no longer needing supplies from third-party BMS companies.

As a whole, China's BMS industry is still very backward compared with that in foreign countries no matter by technical specification or by business model. Meanwhile, consolidation in BMS industry continues to proceed, and some third-party BMS companies have gained a firm foothold and grown stronger via long-term cooperation with battery plants and vehicle makers. As module vendors, packaging companies and vehicle makers accelerate their presence in BMS industry, independent firms that have not entered supply systems will face increasingly narrowed living space.

### **Global and China Power Battery Management System Industry Report, 2015-2018 by ResearchInChina highlights the followings:**

- ✘ Overview of global and Chinese electric vehicle market (including overview, market size, output and sales volume of vehicles, etc.)
- ✘ Overview of global and China BMS industry (embracing status quo, forecast, market size, BMS supporting, etc.)
- ✘ Major vendors in global BMS industry (involving revenue, revenue structure, net income, R&D, products, supporting for vehicle makers, latest developments, business in China, etc.)
- ✘ Major vendors in China BMS industry (comprising revenue, revenue structure, net income, R&D, products, supporting for vehicle makers, new projects, etc.)
- ✘ Main enterprises in BMS chip industry (including revenue, revenue structure, net income, BMS chip solutions, etc.)

### 1 Overview of BMS

- 1.1 Definition of Battery System
- 1.2 Definition of BMS
  - 1.2.1 Definition
  - 1.2.2 Classification

### 2 Overview of Global BMS Market

- 2.1 Overview of Global Electric Vehicle Market
- 2.2 Status Quo and Development Trend of Global BMS Market

### 3 Overview of Chinese BMS Market

- 3.1 Production and Sales Volume of Chinese Electric Vehicle Market
- 3.2 Chinese BMS Market Size
- 3.3 Status Quo and Development Trend of Chinese BMS Market

### 4 Global BMS Vendors

- 4.1 Denso (Japan)
  - 4.1.1 Profile
  - 4.1.2 BMS Business
- 4.2 Preh (Germany)
  - 4.2.1 Profile
  - 4.2.2 BMS Business
- 4.3 Calsonic Kansei (Japan)
  - 4.3.1 Profile

- 4.3.2 BMS Business
- 4.4 Hitachi Automotive Systems (Japan)
  - 4.4.1 Profile
  - 4.4.2 BMS Business
- 4.5 Mitsubishi Electric (Japan)
  - 4.5.1 Profile
  - 4.5.2 BMS Business
- 4.6 Hyundai Kefico (Korea)
  - 4.6.1 Profile
  - 4.6.2 BMS Business
- 4.7 LG Chem (Korea)
  - 4.7.1 Profile
  - 4.7.2 BMS Business
- 4.8 SK Innovation (Korea)
  - 4.8.1 Profile
  - 4.8.2 BMS Business
- 4.9 Tesla Motors (USA)
  - 4.9.1 Profile
  - 4.9.2 BMS Business
- 4.10 Lithium Balance (Denmark)
  - 4.10.1 Profile
  - 4.10.2 Product Description
  - 4.10.3 Product Application
  - 4.10.4 Layout in China
- 4.11 Vecture (Canada)
  - 4.11.1 Profile
  - 4.11.2 Product Description
  - 4.11.3 Product Application

- 4.11.4 Industrial Layout
- 4.12 RimacAutomobili (Croatia)
  - 4.12.1 Profile
  - 4.12.2 Product Description
  - 4.12.3 Product Application
- 4.13 JustPower (Taiwan)
  - 4.13.1 Profile
  - 4.13.2 Product Description and Application
- 4.14 Clayton Power (Denmark)
  - 4.14.1 Profile
  - 4.14.2 Product Description

### 5 Chinese Mainland BMS Vendors

- 5.1 Huizhou Epower Electronics Co., Ltd.
  - 5.1.1 Profile
  - 5.1.2 BMS Business
- 5.2 Harbin GuanTuo Power Equipment Co., Ltd.
  - 5.2.1 Profile
  - 5.2.2 BMS Products
- 5.3 Anhui LIGOO New Energy Technology Co., Ltd.
  - 5.3.1 Profile
  - 5.3.2 BMS Business
- 5.4 BYD
  - 5.4.1 Profile
  - 5.4.2 BMS Business
- 5.5 BAIC BJEV
- 5.6 Beijing Pride New Energy Battery Technology Co., Ltd.

- 5.6.1 Profile
- 5.6.2 BMS Business
- 5.7 Amperex Technology Co., Ltd.
- 5.7.1 Profile
- 5.7.2 BMS Business
- 5.8 China Aviation Lithium Battery Co., Ltd.
- 5.8.1 Profile
- 5.8.2 BMS Business
- 5.9 Sunwoda Electronic Co., Ltd.
- 5.9.1 Profile
- 5.9.2 BMS Business
- 5.10 Winston Battery
- 5.10.1 Profile
- 5.10.2 BMS Products
- 5.11 Hefei Guoxuan High-tech Power Energy Co., Ltd
- 5.11.1 Profile
- 5.11.2 BMS Business
- 5.12 Hangzhou Jieneng Power Co., Ltd.
- 5.12.1 Profile
- 5.12.2 BMS Business
- 5.13 Ningbo Bate Technology Co., Ltd.
- 5.13.1 Profile
- 5.13.2 BMS Business
- 5.14 Ningbo Longway Electrical Co., Ltd.
- 5.14.1 Profile
- 5.14.2 BMS Products


- 5.15 Shenzhen Antega Technology Co., Ltd
- 5.15.1 Profile
- 5.15.2 BMS Products
- 5.16 Wuhu Tianyuan Automobile Electric Co., Ltd.
- 5.16.1 Profile
- 5.16.2 BMS Products
- 5.17 Shenzhen Battsister Tech. Co., Ltd.
- 5.17.1 Profile
- 5.17.2 BMS Business

### **6 Major BMS Chip Vendors**

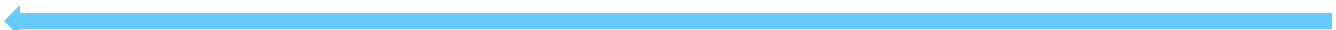
- 6.1 Analog Devices (USA)
- 6.1.1 Profile
- 6.1.2 Operation
- 6.1.3 Revenue Structure
- 6.1.4 Gross Margin
- 6.1.5 BMS Solutions
- 6.2 Texas Instruments (USA)
- 6.2.1 Profile
- 6.2.2 Operation
- 6.2.3 Revenue Structure
- 6.2.4 Gross Margin
- 6.2.5 Status Quo and Prospect of BMS Chip Business
- 6.3 Infineon (Germany)
- 6.3.1 Profile
- 6.3.2 Operation

- 6.3.3 Revenue Structure
- 6.3.4 Gross Margin
- 6.3.5 Status Quo and Prospect of BMS Chip Business

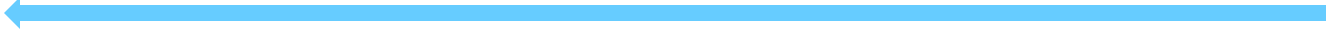
- Storage Battery System
- BMS Structure with the Basic Functions
- Global HEV/EV Market Size, 2008-2017E
- Major EV Models and Supporting BMS around the World
- China's BEV Output and Sales Volume, 2012-2015Q1
- China's PHEV Output and Sales Volume, 2012-2015Q1
- China's BMS Demand, 2012-2017E
- Models/Automakers Supported by Major Chinese BMS Vendors
- Sales Structure of Denso's Automotive Business, FY2014-FY2015
- Sales of Denso's Powertrain Control Systems Division, FY2012-FY2015
- Denso's Sales Structure by Customer, FY2015
- Denso's BMS Supply
- Denso's R&D Investment, FY2012-FY2015
- Electronics Division and Products of Joyson Electronics
- BMW i3BMS
- Preh's Revenue, 2004-2014
- Preh's Global Divisions
- Calsonic's Revenue and Net Income, FY2010-FY2014
- Revenue Breakdown of Calsonic by Region, FY2014
- Models/Automakers Supported by Calsonic Kansei's BMS-related Products
- Sales of Mitsubishi Electric by Business, FY2015
- Revenue and Net Income of Kefico, 2010-2014
- Diagram of Equity Structure of LG Chemical, 2013
- Power Battery Business Framework of LG Chemical
- LG Chemical's BMS

- 
- Application of LG Chemical's Power Battery and BMS
  - Technical Specifications of SK Innovation's Power Lithium Battery and BMS
  - Tesla's Revenue from Power System and Related Components, 2011-2014
  - Electric Vehicle Variant of Smart Fortwo
  - Toyota RAV4 EV
  - Scalable BMS (s-BMS)
  - Integrated BMS (i-BMS)
  - Tennant's 500ZE
  - TMHE Electric Forklifts
  - ECOTRUCK7500 Electric Garbage Collection Trucks
  - Customers of Lithium Balance
  - Overview of Lithium Balance's Agents in China
  - Vecture's BMS
  - Application of Vecture's Products
  - Community Smart Grid Projects
  - "Eve" Project
  - Rimac's R-BMS2
  - Rimac's Concept\_One
  - Application of JustPower's BMS Products
  - Major Partners of JustPower
  - Clayton's BMS
  - BMS Products of Epower Electronics
  - Some Partners of Epower Electronics
  - Revenue and Net Income of Epower Electronics, 2011-2014
  - BF101 BMS



- 
- Waterproof Series (BC111/BS111/BS113/BS313)
  - Specifications of Guantuo Power's BMS
  - Some Customers of LIGOO New Energy Technology
  - EK-FT-12 Commercial Vehicle BMS (Enhanced)
  - LIGOO New Energy Technology's BMS for Light Vehicles
  - LIGOO New Energy Technology's BMS for Large and Medium-sized Vehicles
  - Electric Vehicle Sales Volume of BYD, 2011-2017E
  - Diagram of Equity Structure of Beijing Pride New Energy Battery Technology, 2013
  - Customers and Area of Cooperation of Beijing Pride New Energy Battery Technology
  - Customers Supported by ATL
  - Diagram of Equity Structure of China Aviation Lithium Battery, 2013
  - Major Indicators of Sunwoda Electronic's BMS
  - Revenue and Net Income of Sunwoda Electronic, 2010-2015Q1
  - Revenue Structure of Sunwoda Electronic by Product, 2014
  - GTBMS005A-MC 11 Color-screen BMS
  - Diagram of Equity Structure of Hefei Guoxuan High-tech Power Energy (Before Backdoor Listing)
  - Hefei Guoxuan High-tech Power Energy's BMS
  - Business Performance of Hefei Guoxuan High-tech Power Energy, 2009-2014
  - ABM-BMS Active Equalization of Hangzhou Jieneng Power
  - Major Customers of Ningbo Bate Technology
  - BMS of SAIC Roewe 750HEV
  - Main Specifications of Ningbo Bate Technology's BMS
  - BMS- 200 LF of Ningbo Longway Electrical
  - 24V100AH Power Lithium BMS
  - BMS of Wuhu Tianyuan Automobile Electric

- Main Specifications of Wuhu Tianyuan Automobile Electric's BMS
- BMS-108 Electric Vehicle Battery Management Series
- Partners of Shenzhen Battsister Tech.
- Revenue and Gross Margin of ADI, 2007-2014
- Net Income and Net Profit Margin of ADI, 2007-2014
- Revenue Breakdown of ADI by Region, 2010-2014
- Revenue Breakdown of ADI by Industry, 2014
- Gross Margin Growth of ADI, 2008-2014
- ADI's HEV/ EV Lithium Battery Management Solutions ( $\leq 150$  V)
- ADI's HEV/ EV Lithium Battery Management Solutions ( $\geq 300$  V)
- Revenue and Gross Margin of TI, 2007-2014
- Net Income and Net Profit Margin of TI, 2007-2014
- Revenue Breakdown of TI by Product, 2007-2014
- Revenue Breakdown of TI by Region, 2007-2014
- Gross Margin Growth of TI, 2007-2014
- Operating Margin of TI's Main Products, 2007-2014
- TI's HEV and BEV Solutions
- TI's BMS Solutions
- TI's BMS
- Revenue and Gross Margin of IFX, FY2009-FY2014
- Net Income and Net Profit Margin of IFX, FY2009-FY2014
- Revenue Breakdown of IFX by Division, FY2009-FY2014
- Revenue Breakdown of IFX by Region, FY2009-FY2014
- Gross Margin Growth of IFX, FY2009-FY2014
- Market Share of Major Global Automotive Semiconductor Companies, 2013

- 
- Revenue of IFX's Automotive Electronics Division, FY2009-FY2014
  - Major Customers of IFX's Automotive Electronics Division
  - IFX's BMS Solutions
  - IFX's Revenue in China, FY2009-FY2014
  - Revenue and New Energy Vehicle Sales Volume of Foton, 2009-2013

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