



JAE



Whitepaper

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The Electric

Vehicle Industry

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Technology to Inspire Innovation

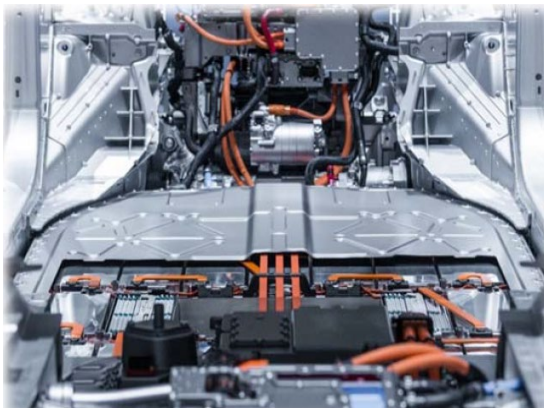


E-Mobility

With a long history in providing high quality connectors for the traditional automotive industry, JAE is also perfectly positioned to serve the growing electric vehicle market.



The demand for electric vehicles is booming around the world, not only due to stricter international environmental regulations, but also consumer demand. With better performance and greater range, people now want to drive electric cars. This growing demand leads to a higher price sensitivity.



Newer EV models have a large amount of battery cells, and JAE connectors will ensure an efficient distribution of power around EV's, the monitoring and management of power units, etc. Another growing market is the charging infrastructure, and a wide variety of international standards means heavy demand for connectors at Vehicle-to-Grid and Vehicle to-Home installations.



Image: JAE's KW21 Series

JAE connectors are used in all the key areas of EV's: from the charging inlet, to the battery junction box, and to the motors, JAE provide compact connectors to a high specification. For EV charging, JAE has been developing

connectors for home and public charging stations for many years, in all major international territories.

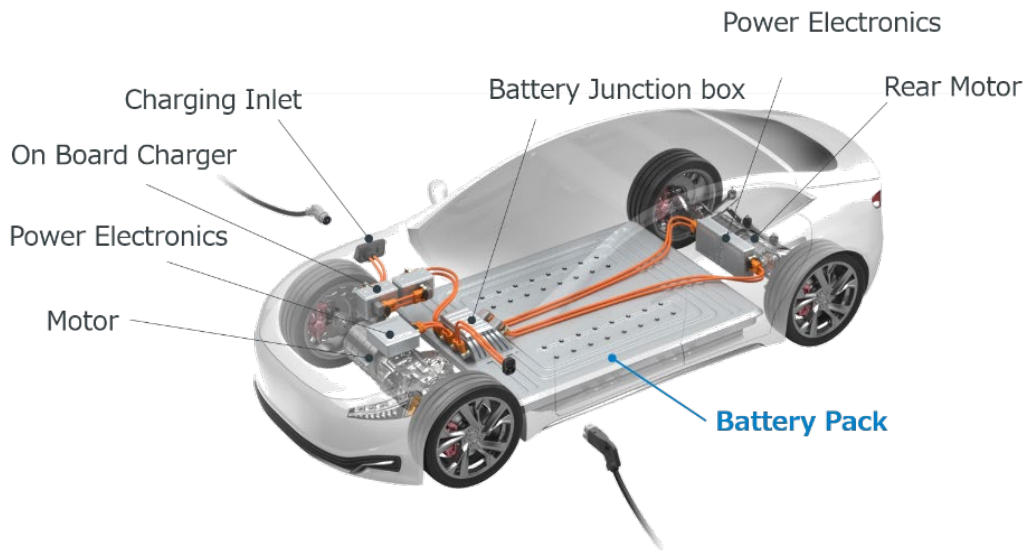


Image: Application areas for JAE products

The battery units installed in EV's and PHEV's consist of numbers of electronics, including battery modules and a battery monitoring system that monitors the status of battery cells. JAE has developed a wide range of automotive connectors to be used in connecting the components within each module.

For the connectors on the battery module, it is necessary to have multiple key options to prevent a mating error during installation, and there is also a lower height requirement due to the limited space.



Image: JAE HV connector for battery power

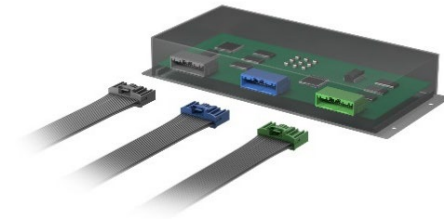


Image: JAE BMS applications

JAE has developed a full range of automotive connectors to meet those requirements.

The EV sector is on a very rapid growth curve, and is a very positive and innovative industry. JAE will continue to be at the heart of it.

EV technology has left the early stage of development. Future growth requires a brand new mind-set from all players to push innovation and to make e-Mobility attractive and possible for high volume markets. Miniaturization of all components including connections will be playing an important role, because it reduces the number of cables in the car. In addition, it is also very important to simplify the serviceability of the systems.

About JAE

As a globally recognized supplier of electronic connectors, JAE Europe Limited (subsidiary of Japan Aviation Electronics Industries, Ltd (JAE)) designs, manufactures and markets superior electronic connectors and aerospace products to a variety of industries. With the philosophy “Explore, Create, and Practice”, the company continues to lead the way in providing innovative solutions to an increasingly demanding industry. By combining divergent technologies from experience gained in the aerospace and automotive industries, JAE has been able to transfer these technologies into advanced connector designs with the most demanding applications in the industry. Our parent company, Japan Aviation Electronics Industries, Ltd. (JAE), is a globally oriented supplier of electronic components, fibre optic connectors, LCD monitor connectors, waterproof electrical connectors and other digital systems. Wholly owned by Japan Aviation Electronics Industries, Ltd., Tokyo, Japan (JAE), JAE Europe Limited was established on 1996. Solutions for a Wide Variety of Industries: At JAE, we offer a wide selection of connector and sensor solutions for a variety of different industry applications.

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Tobias Schmöker is Senior Product Manager at JAE Europe. Within his field of expertise, Tobias is responsible for the EV connector sector in JAE Europe.

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