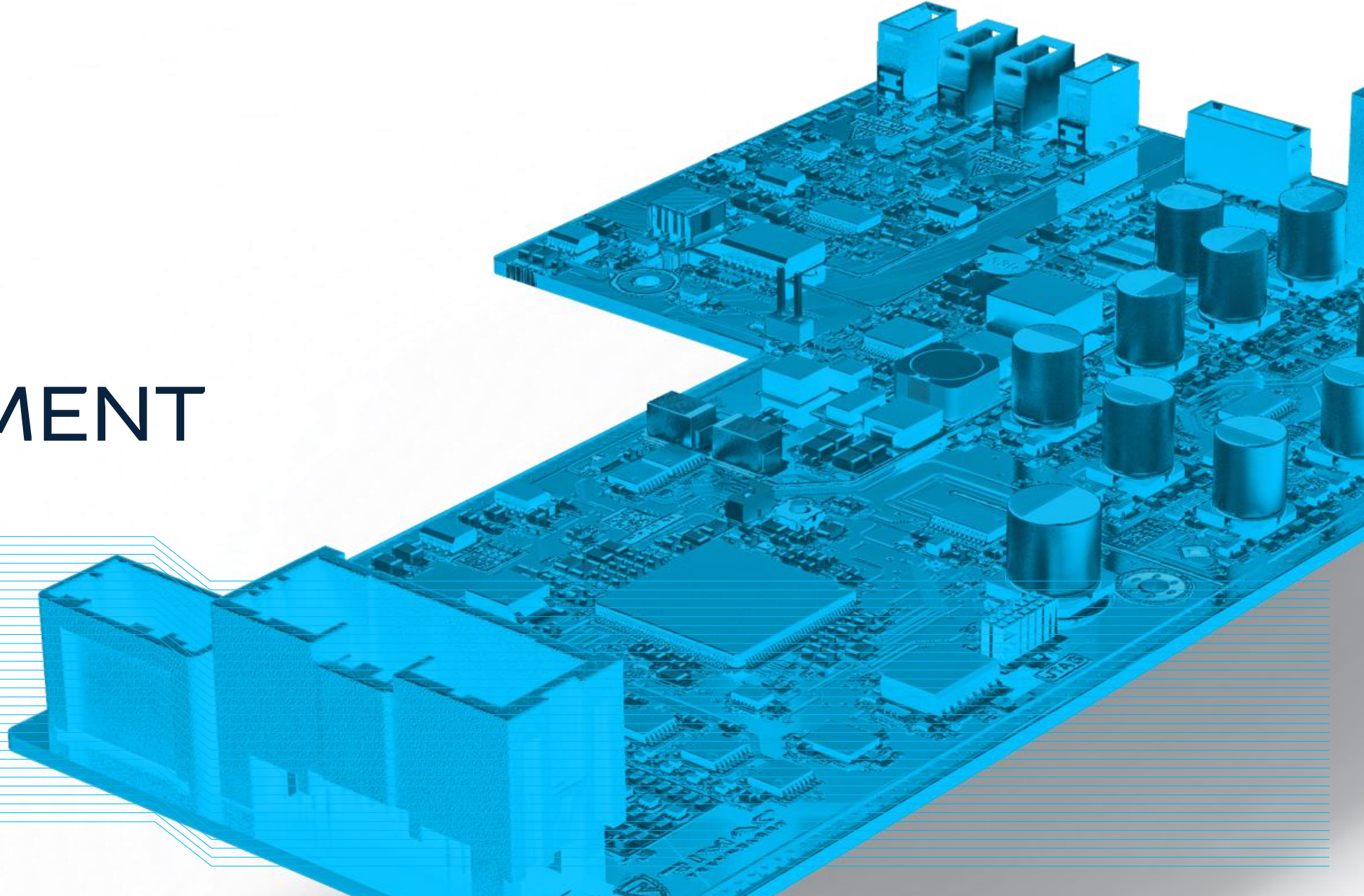
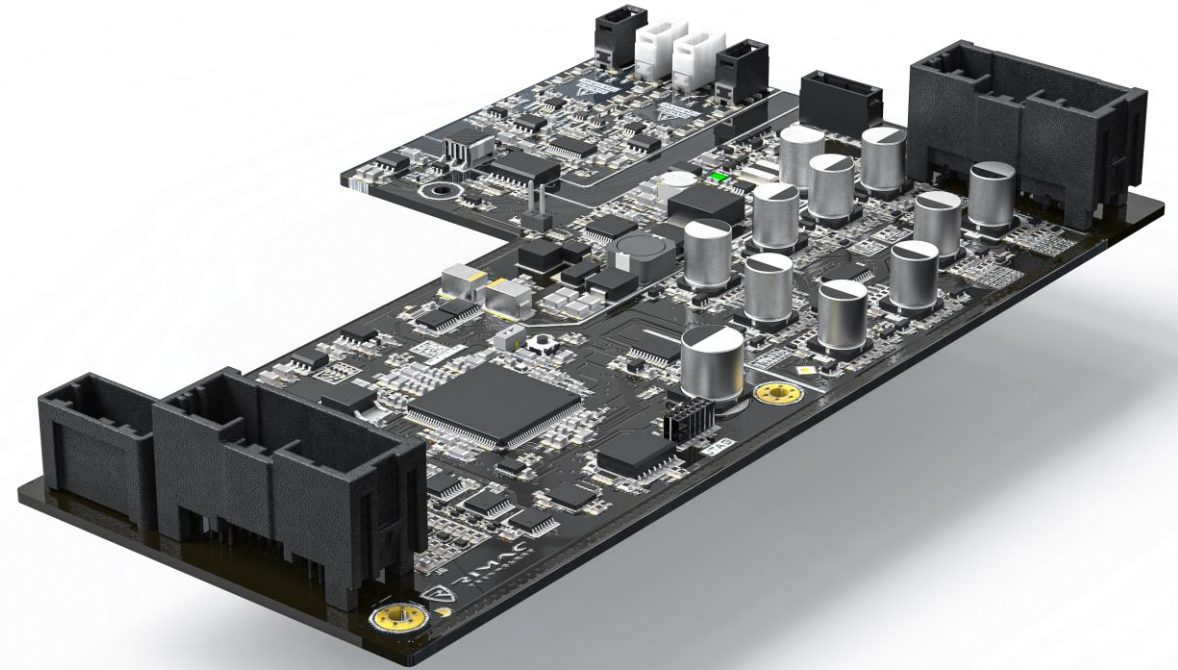


BATTERY MANEAGEMENT SYSTEMS



WITH EXTENSIVE EXPERIENCE FROM A BROAD RANGE OF PROJECTS, RIMAC OFFERS ALL-IN-ONE BATTERY SOLUTIONS FOR A WIDE VARIETY OF DIFFERENT APPLICATIONS.

From determining the cell, to developing the Thermal Management System, Battery Management System, and Power Distribution Unit, our in-house development goes into deep detail, while taking all of your project requirements into consideration.



DESCRIPTION

The Battery Management System is a crucial component in the operation of a vehicle's battery modules. The BMS surveys and controls each module's functions, thus allowing for peak performance from every individual module.

MAIN FEATURES

- Very compact design
- High current balancing
- Optimised battery usage through precise SOX algorithms
- Flexible master-slave architecture
- Very high measurement accuracy ($\pm 1.5\text{mV}$) and refresh rate
- Ultra low power consumption

SOX

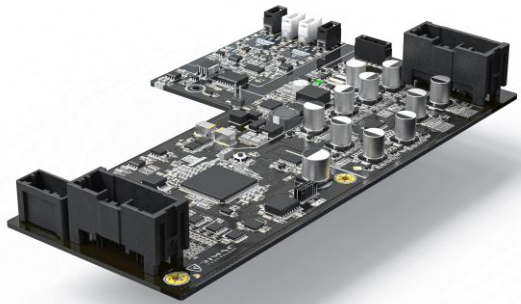
SOX is a crucial part of the application software inside our BMS which plays critical role in safe and optimal usage of the battery. Major SOX parts include but not limited to:

- State-Of-Charge (SOC): Is the ratio of here remaining energy capacity to the total available energy capacity.
- State-Of-Power (SOP): Is the indicator of available power limitation by the battery during discharge and available power limitation to provide to the battery during charge.
- State-Of-Health (SOH): Is a measure of the aging of the battery over the course of usage.
- State-Of-Energy (SOE): Is the measure of available energy left out of maximum available energy of the battery.



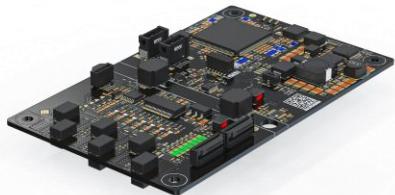
BMS M04 MASTER

INPUTS	8 x Analog, 8 x Digital, 8 x PWM, 1 x Ignition
OUTPUTS	8 x 4A High side switches, 2 x Half bridges 15A, 6 x Half bridges [4A], 1 x Fault
COMMUNICATION	3 x CAN, 1 x LIN
PROTECTION	Overvoltage, Undervoltage, Reverse polarity ESD



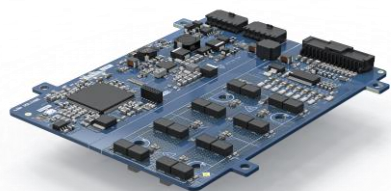
BMS M04 MASTER +HV

INPUTS	8 x Analog, 8 x Digital, 8 x PWM, 1 x Ignition, 2 x HV measurement (0-1000V)
OUTPUTS	8 x 4A High side switches, 2 x Half bridges 15A, 6 x Half bridges [4A], 1 x Fault
COMMUNICATION	3 x CAN, 1 x LIN
PROTECTION	Overvoltage, Undervoltage, Reverse polarity ESD



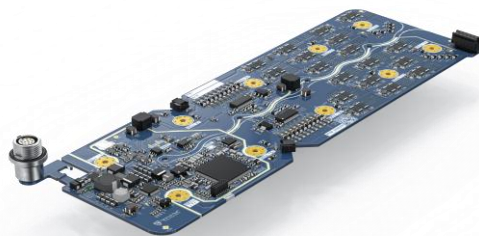
BMS S06 SLAVE

NUMBER OF CELLS	6s
TEMPERATURE SENSORS	2
ACCURACY	+/- 2.3mV
BALANCING CURRENT	200mA
REFRESH RATE	10ms



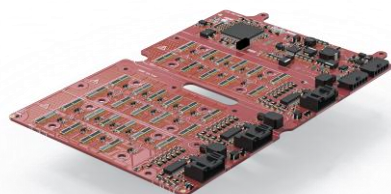
BMS S08 SLAVE

NUMBER OF CELLS	8s
TEMPERATURE SENSORS	3
ACCURACY	+/- 1.6mV
BALANCING CURRENT	200mA
REFRESH RATE	10ms



BMS S18 SLAVE

NUMBER OF CELLS	18s
TEMPERATURE SENSORS	2
ACCURACY	+/- 1.6mV
BALANCING CURRENT	200mA
REFRESH RATE	10ms



BMS S32 SLAVE

NUMBER OF CELLS	32s
TEMPERATURE SENSORS	6
ACCURACY	+/- 1.6mV
BALANCING CURRENT	200mA
REFRESH RATE	20ms

