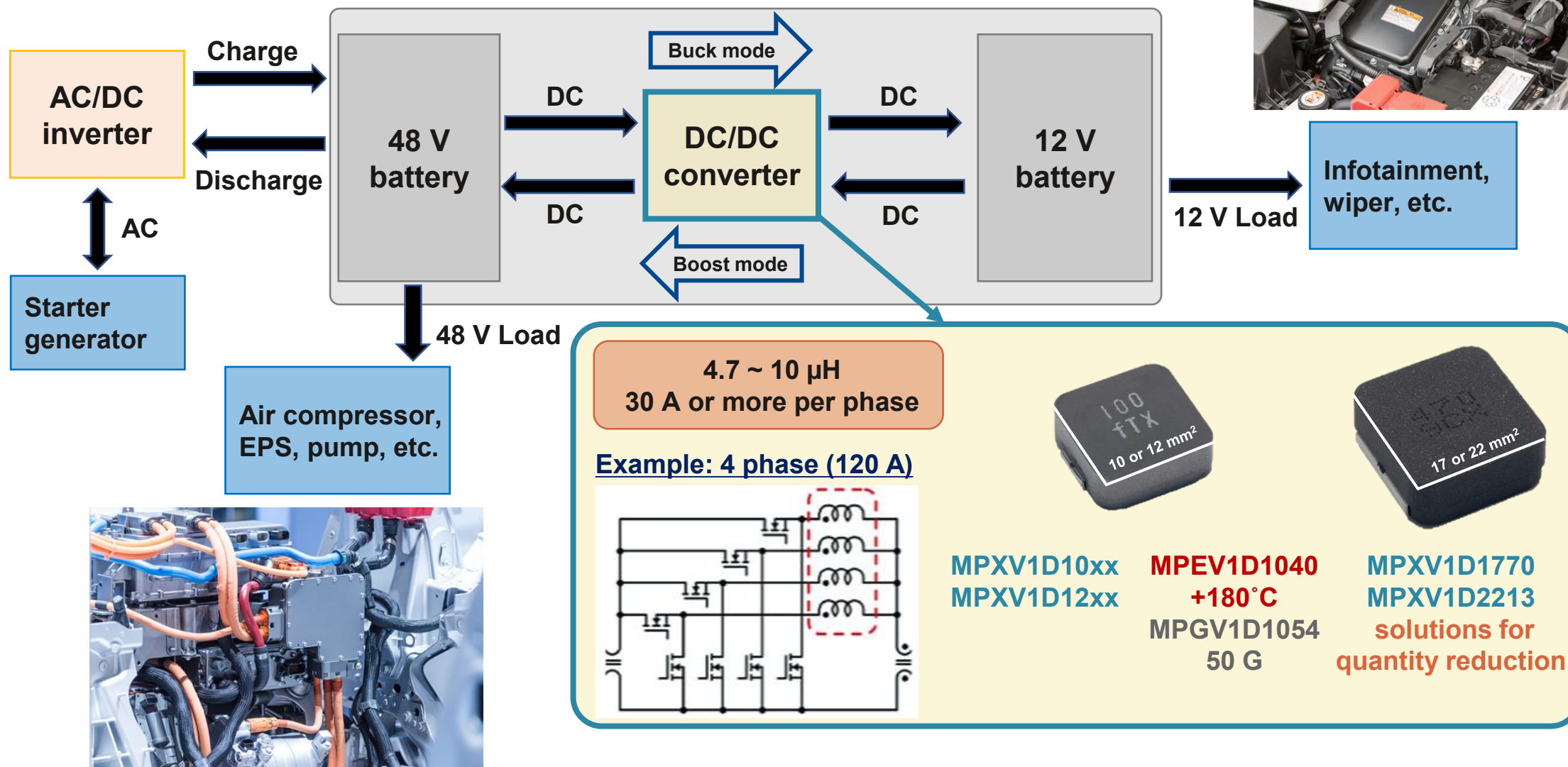


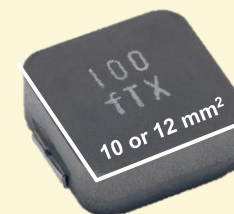
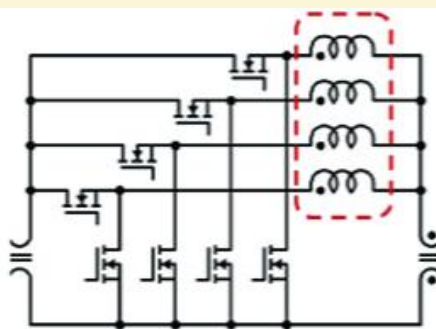
① Multi-Phase Bidirectional Buck-Boost Converter for 12 V / 48 V System

System image



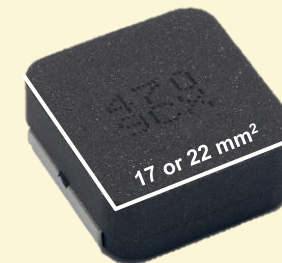
4.7 ~ 10 μH
30 A or more per phase

Example: 4 phase (120 A)



MPXV1D10xx
MPXV1D12xx

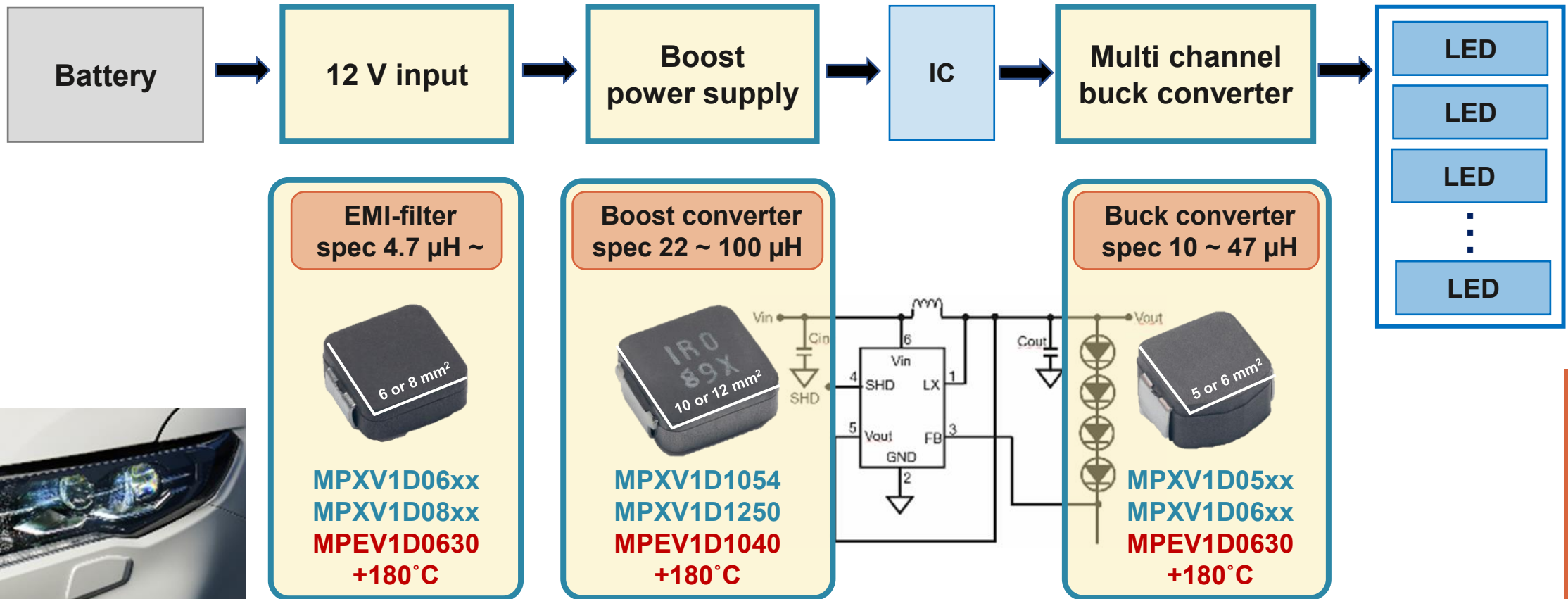
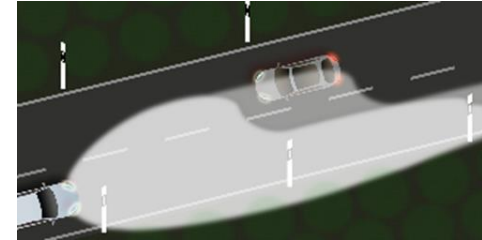
MPEV1D1040
+180°C
MPGV1D1054
50 G



MPXV1D1770
MPXV1D2213
solutions for
quantity reduction

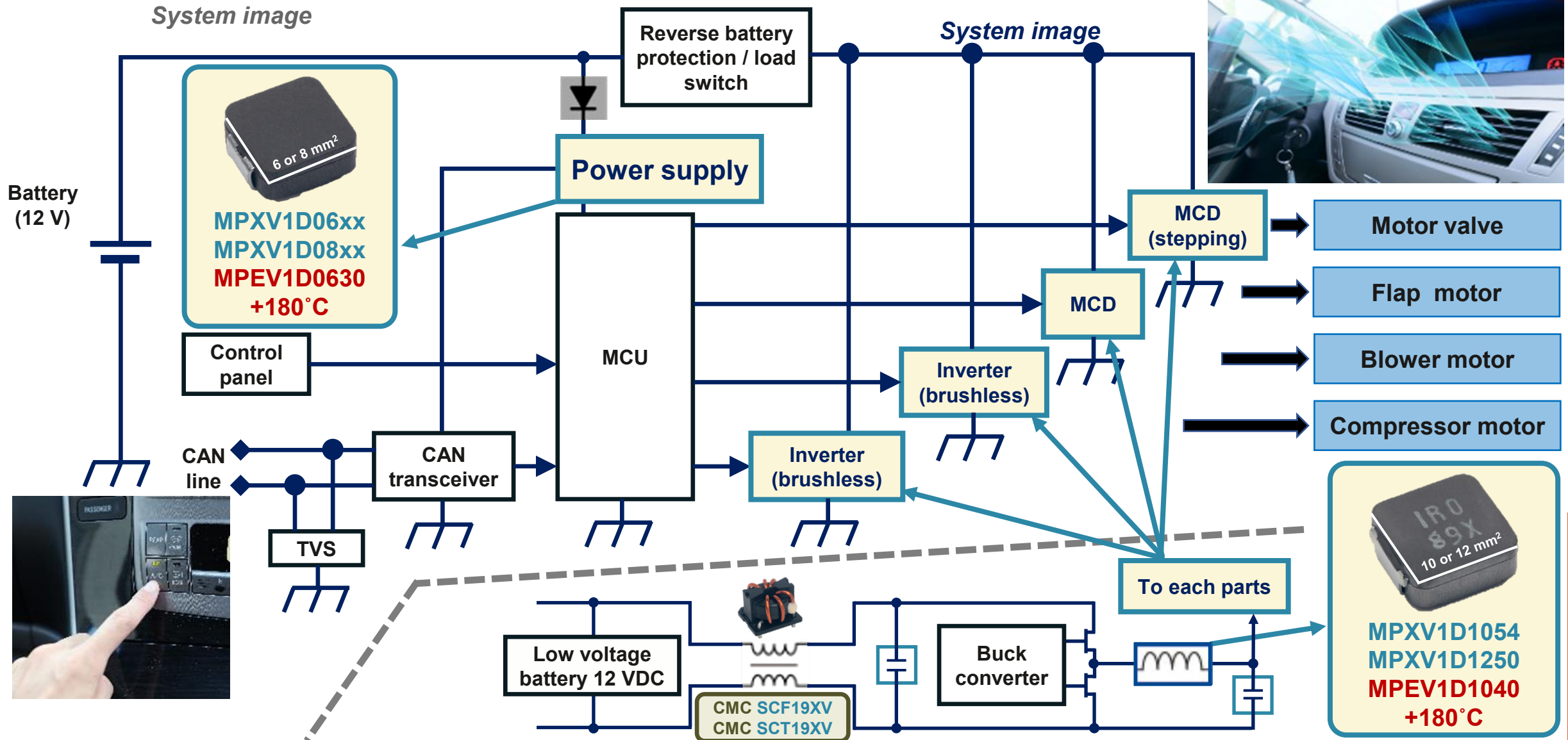
② Adaptive Driving Beam (ADB) Headlamp System (LED Headlighting)

System image



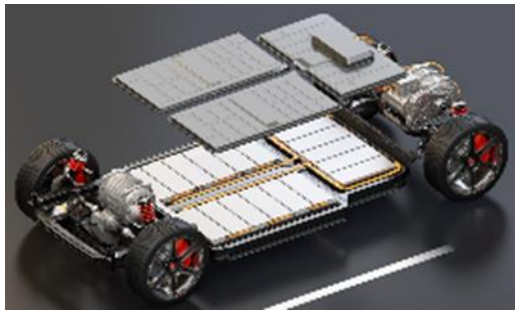
③ Heating Ventilation and Air Conditioning (HVAC)

MCD: Motor control driver

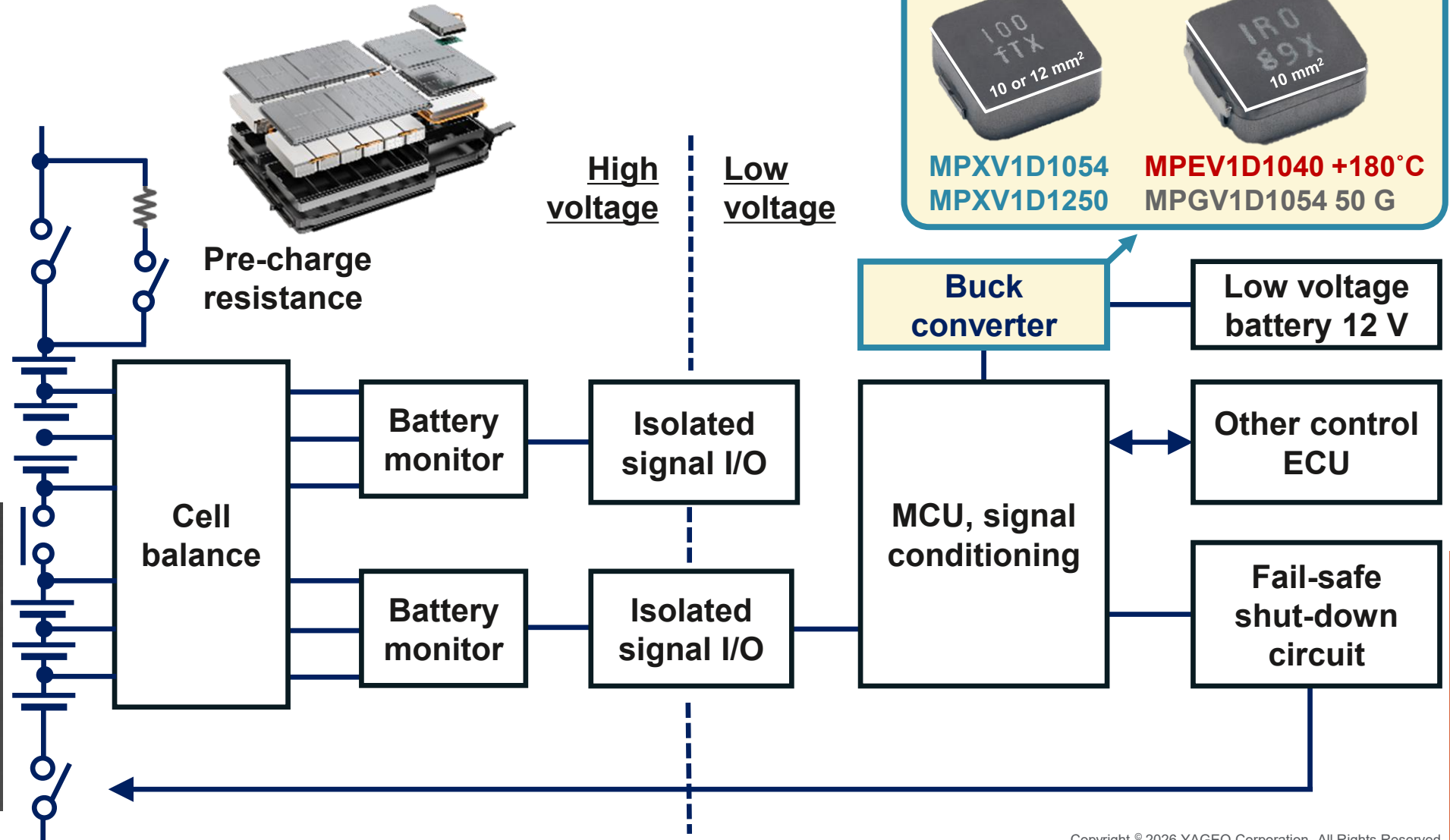
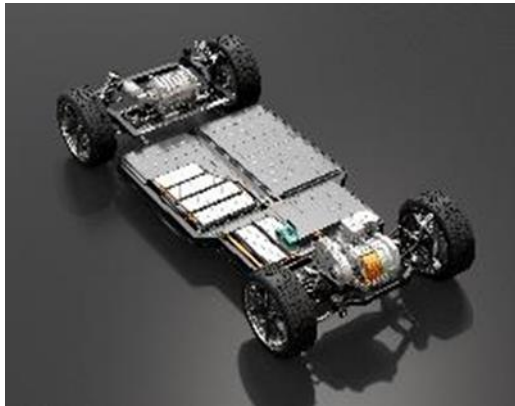


④ Battery Management System (BMS)

System image

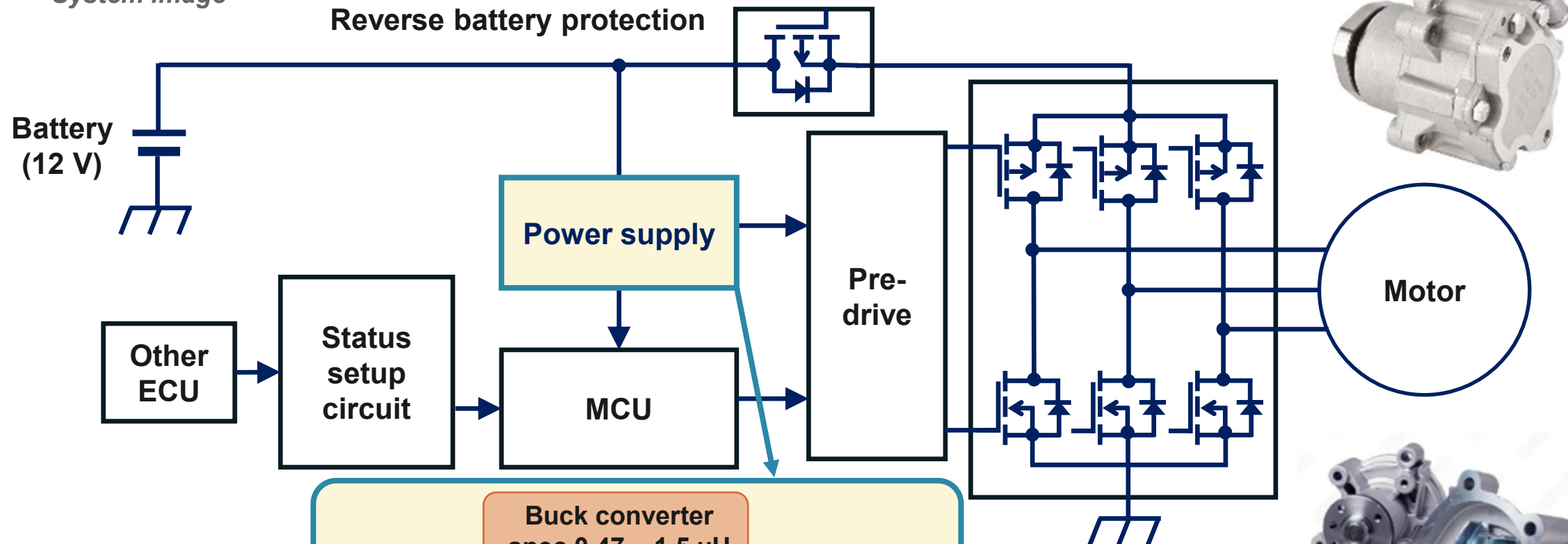


EV/HEV battery
200 ~ 800 V



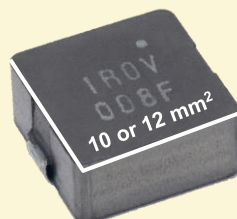
⑤ Electric Oil Pump Water Pump

System image

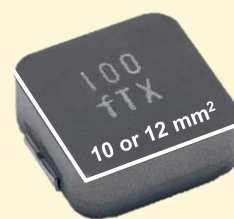


Input filter requires low DCR

- **MPCV series** recommended
- **Advantage: flat wire**



MPCV1060
MPCV1260

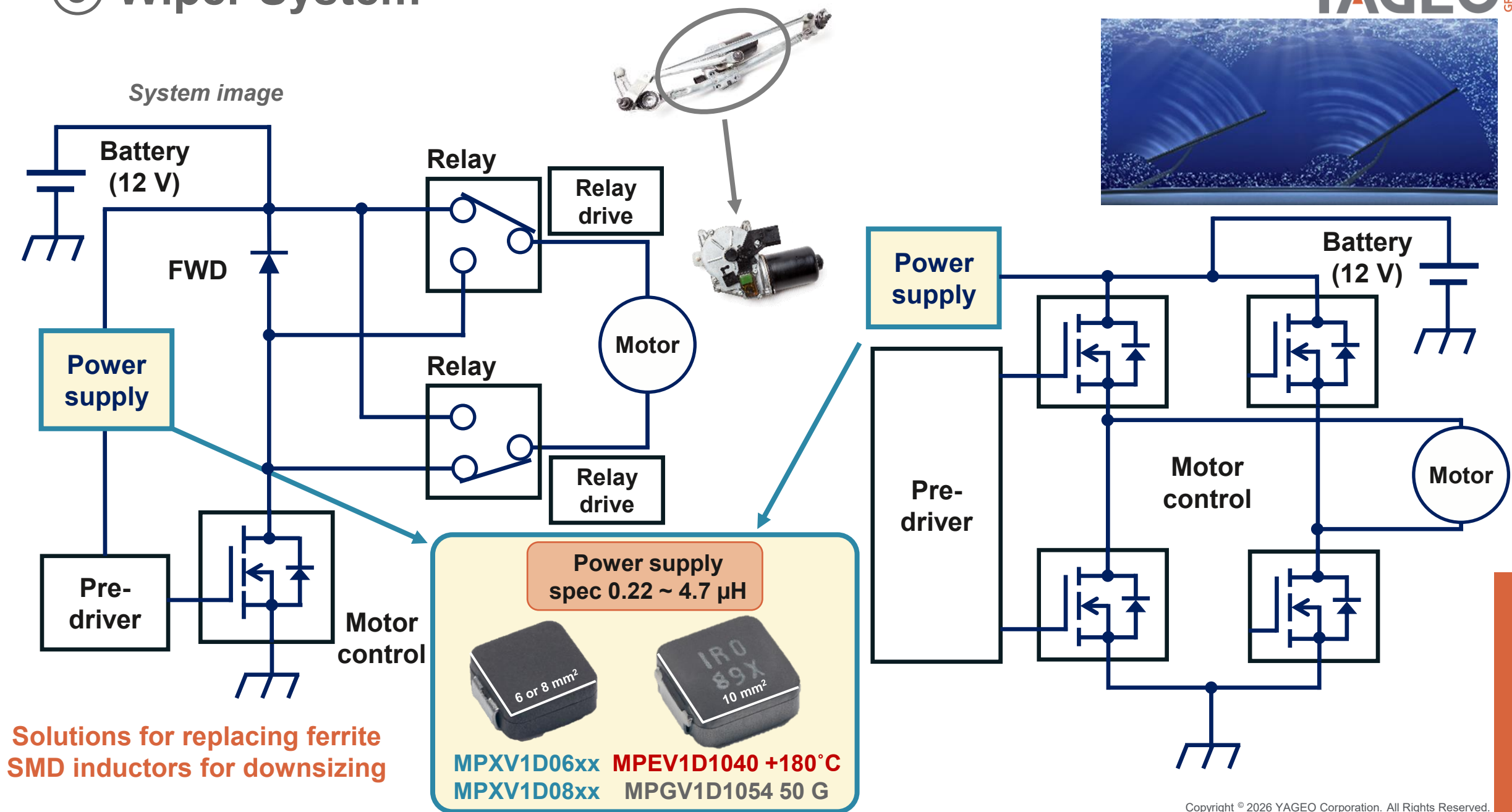


MPXV1D10xx
MPXV1D12xx



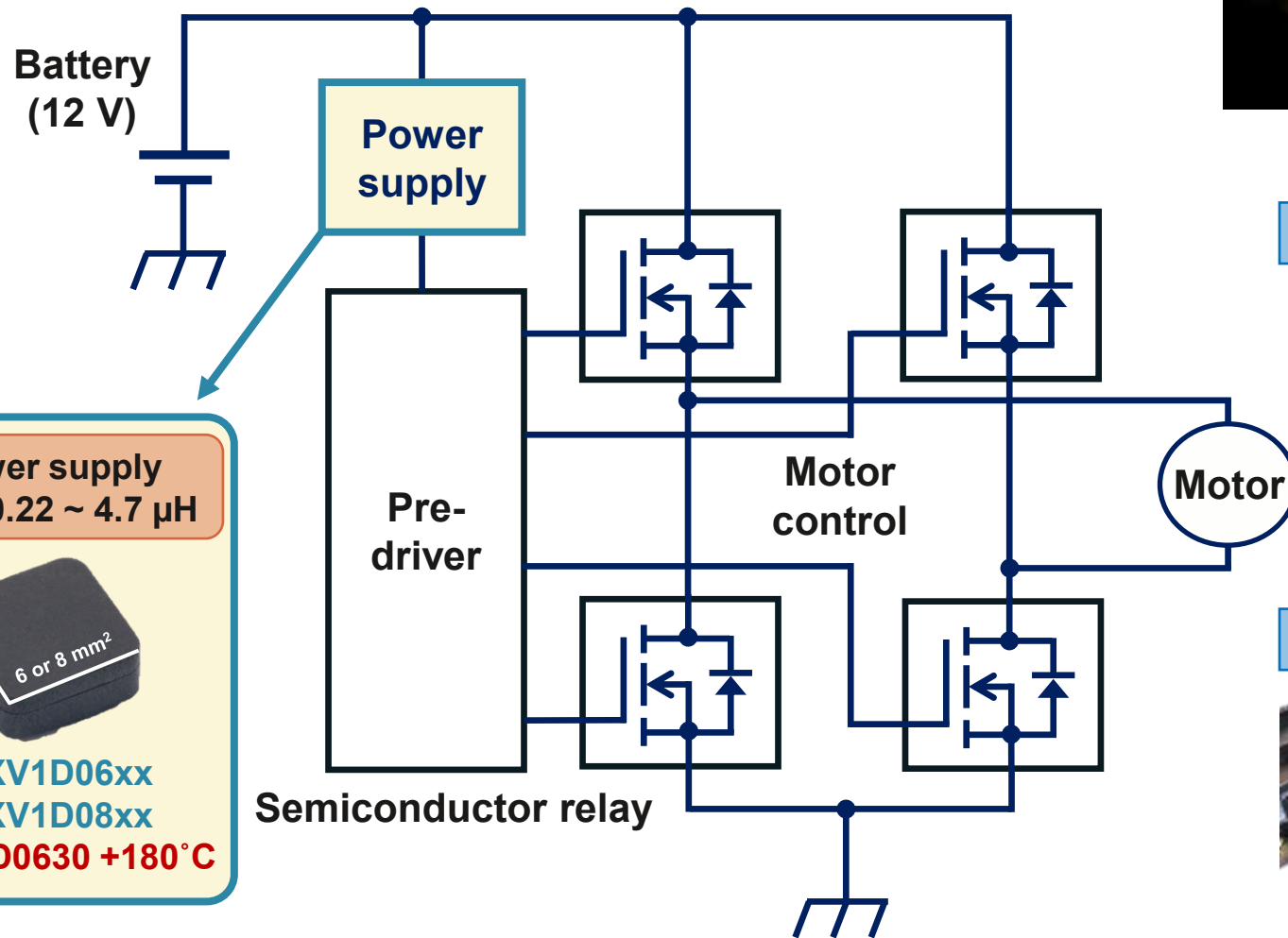
MPEV1D1040 +180°C
MPGV1D1054 50 G

⑥ Wiper System

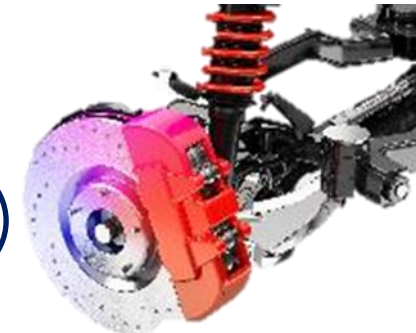


⑦ Electric Parking Brake (EPB)

System image



Disk brake caliper



Drum brake



⑧ Electric Power Steering (EPS)

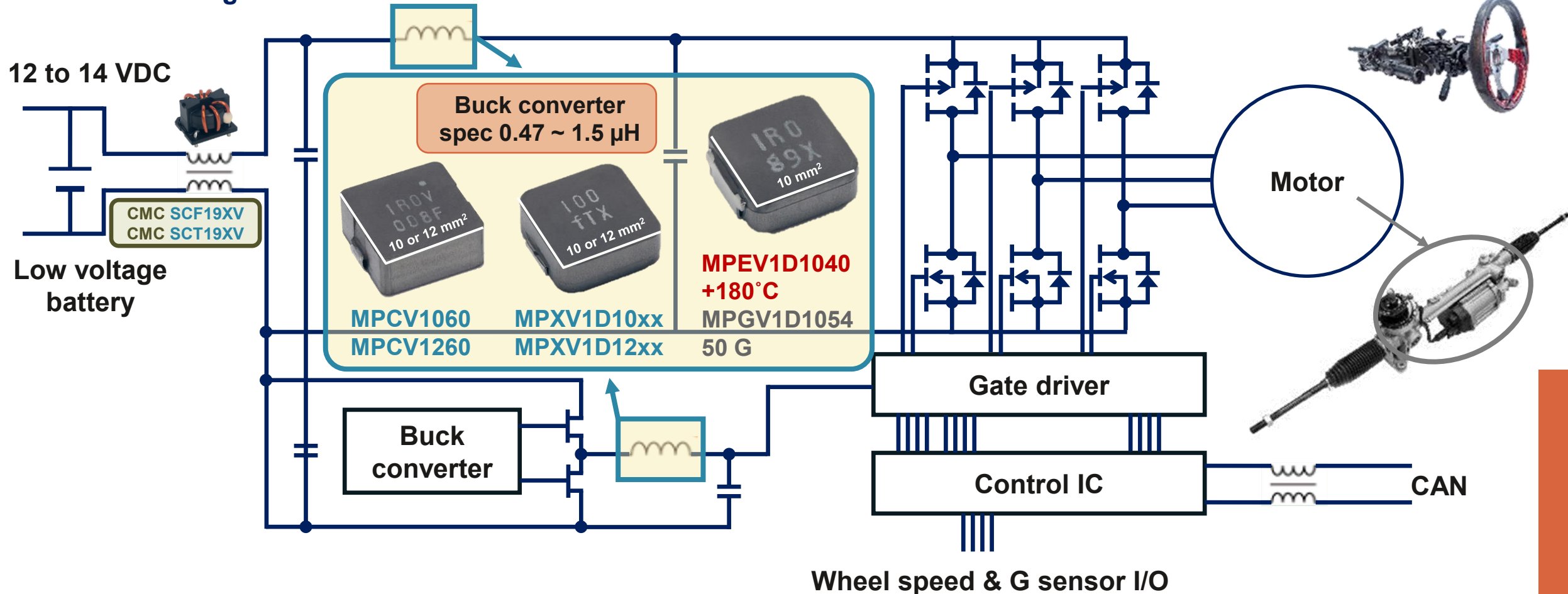
System image



Input filter requires low DCR

- **MPCV** series recommended
- Advantage: flat wire

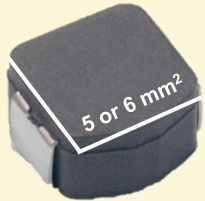
Solutions for size reduction



⑨ Head Up Display (HUD)

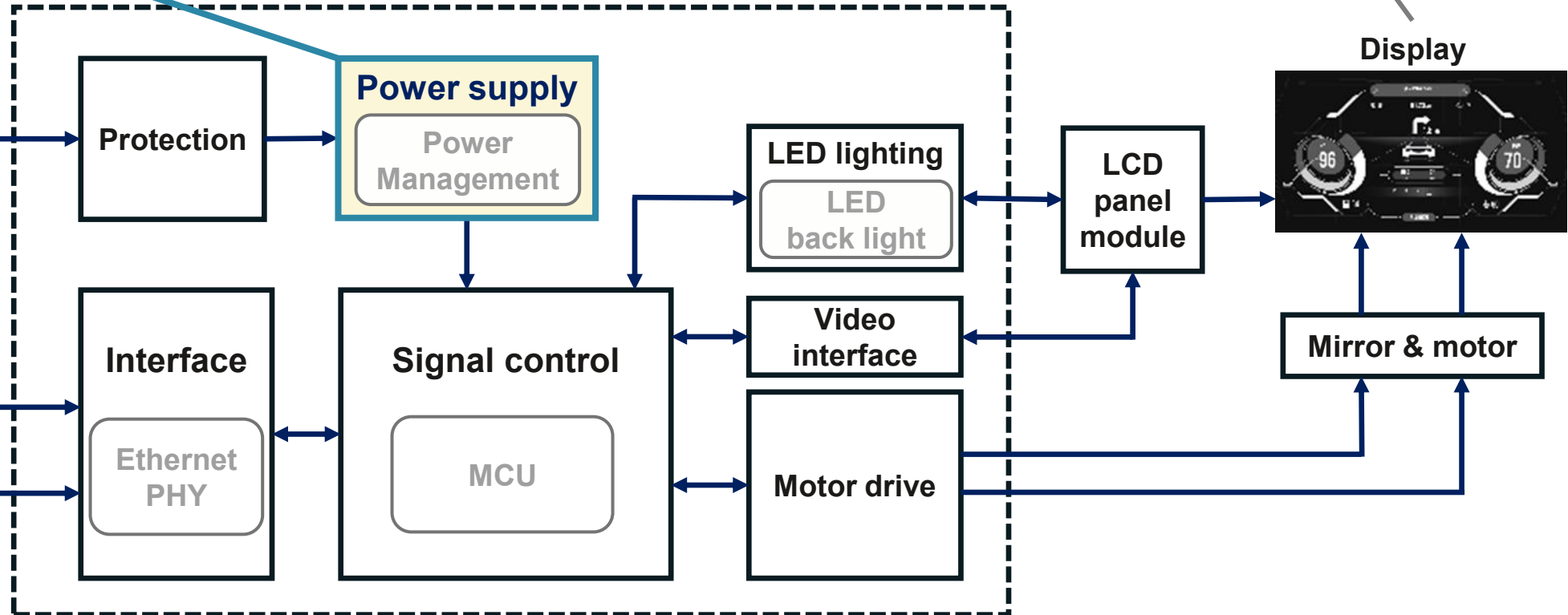
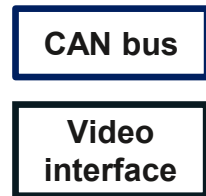
System image

Power supply
spec 1 ~ 10 μ H



MPXV1D05xx
MPXV1D06xx
MPEV1D0630 +180°C

Battery
(12 V)



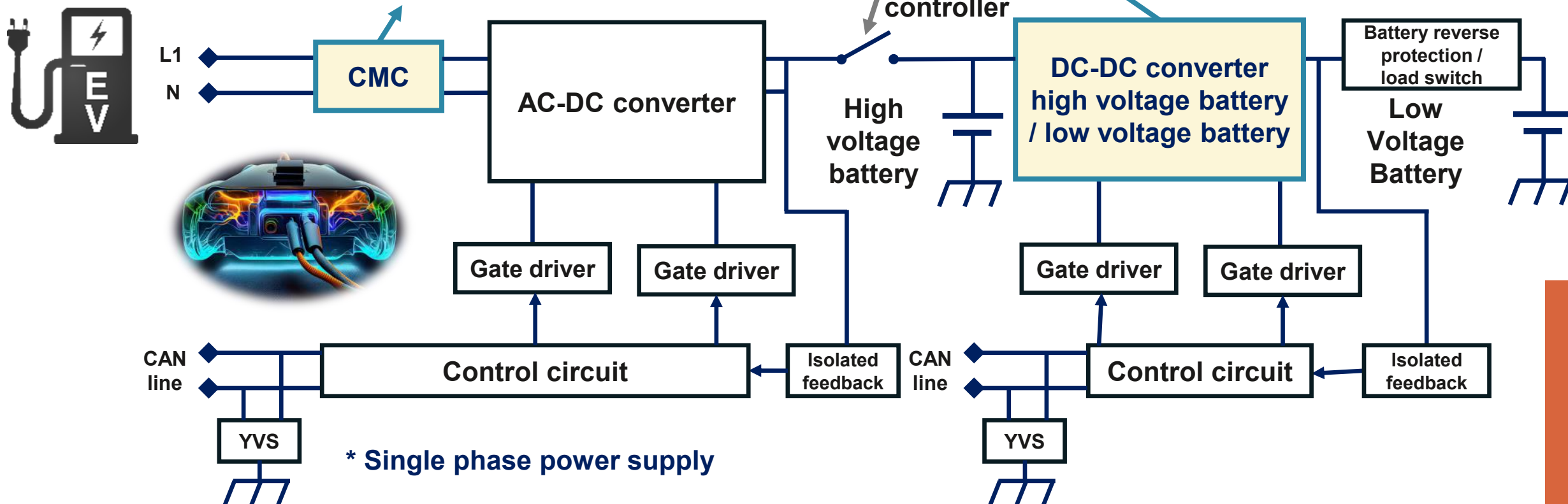
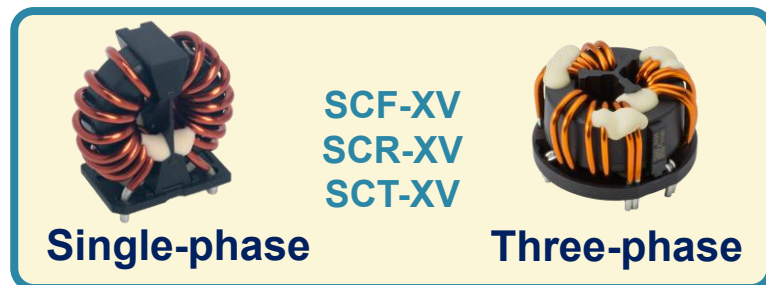
Display



Mirror & motor

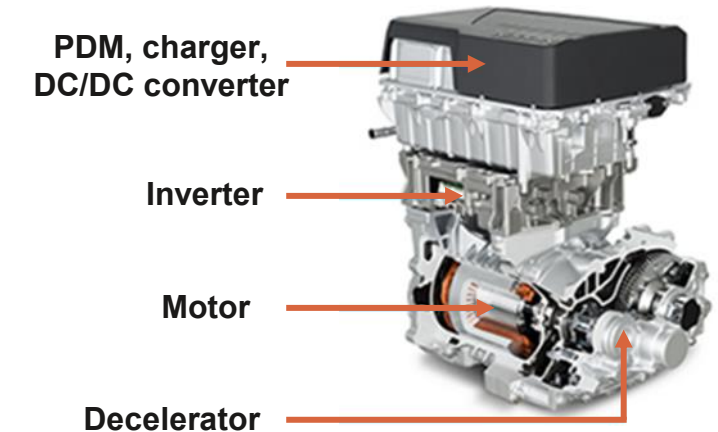
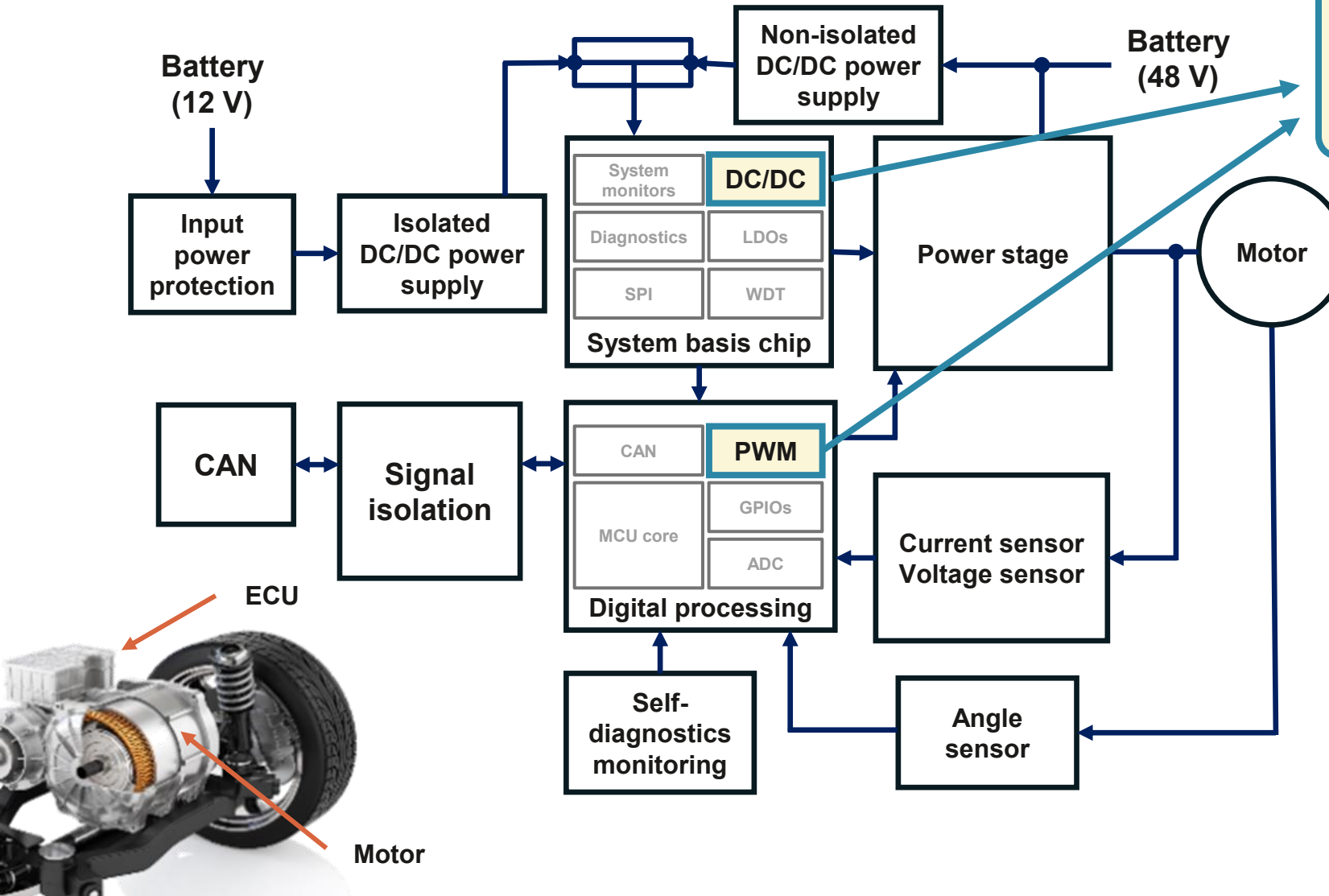
⑩ On-Board Charger (OBC)

System image



⑪ Hybrid Car Drive Motor

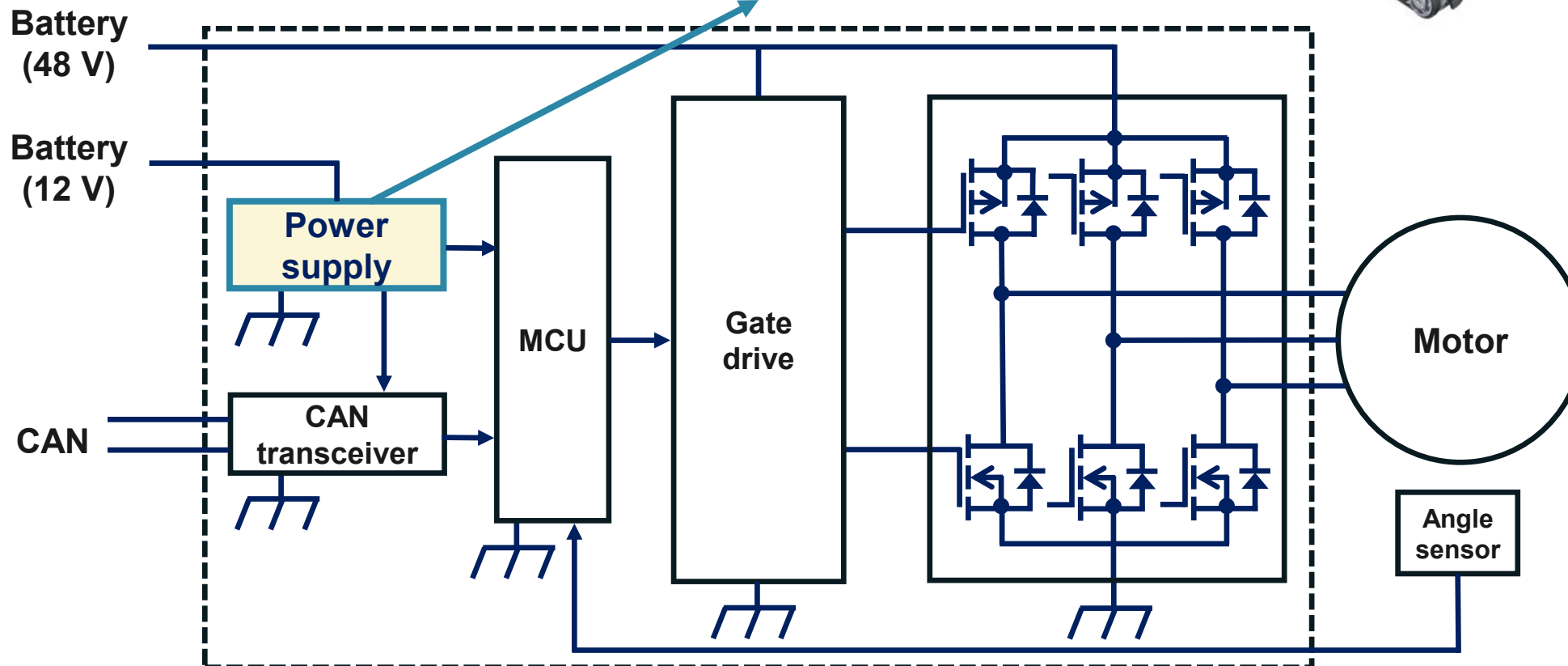
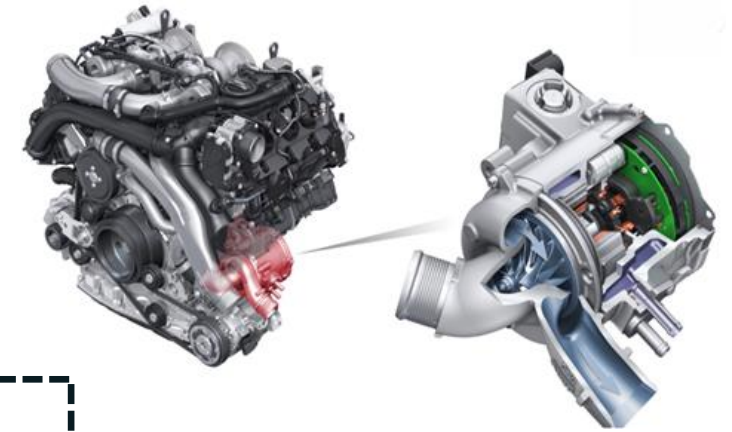
System image



PDM : Power Delivery Module

⑫ Automotive Electric Turbocharger

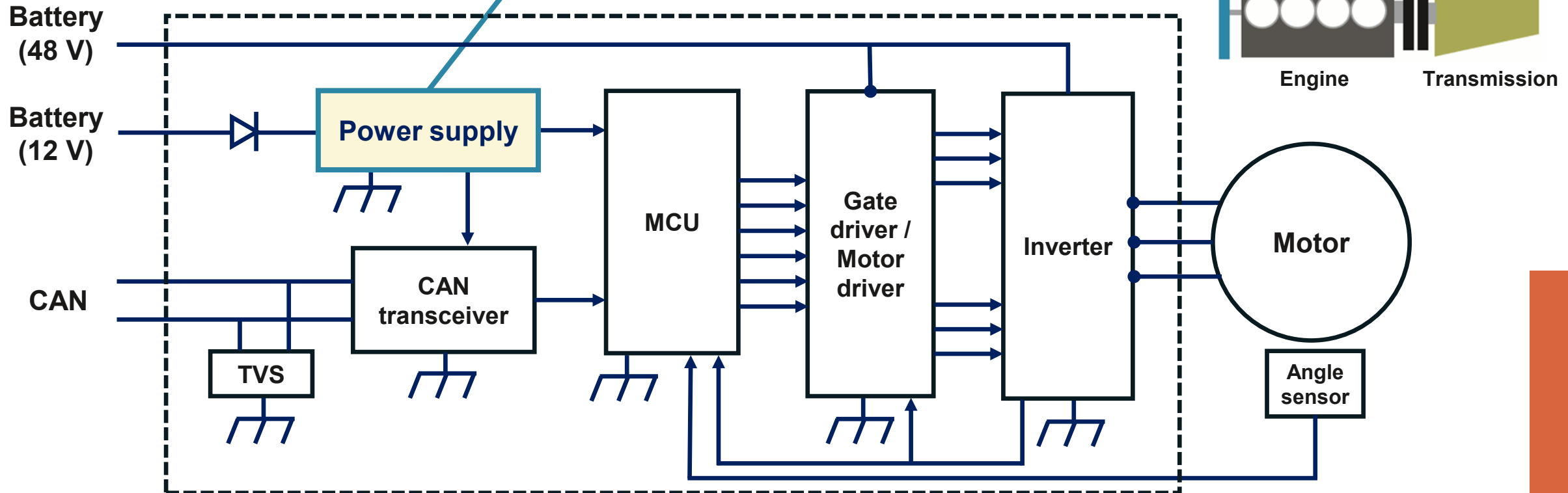
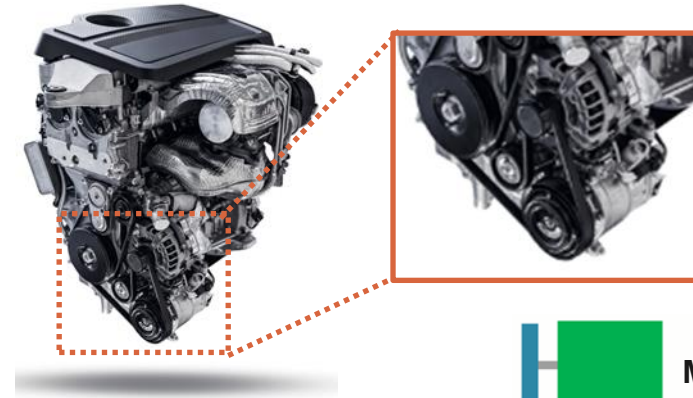
System image



⑬ Belt-Driven Starter Generator (BSG)

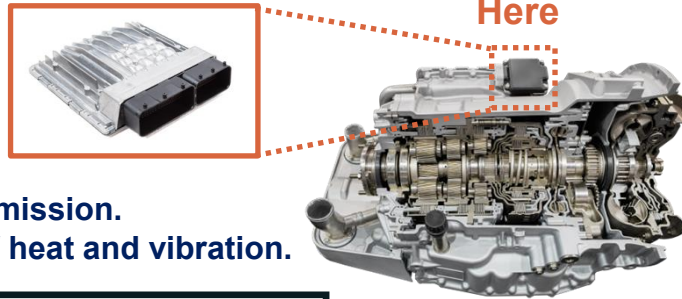


System image

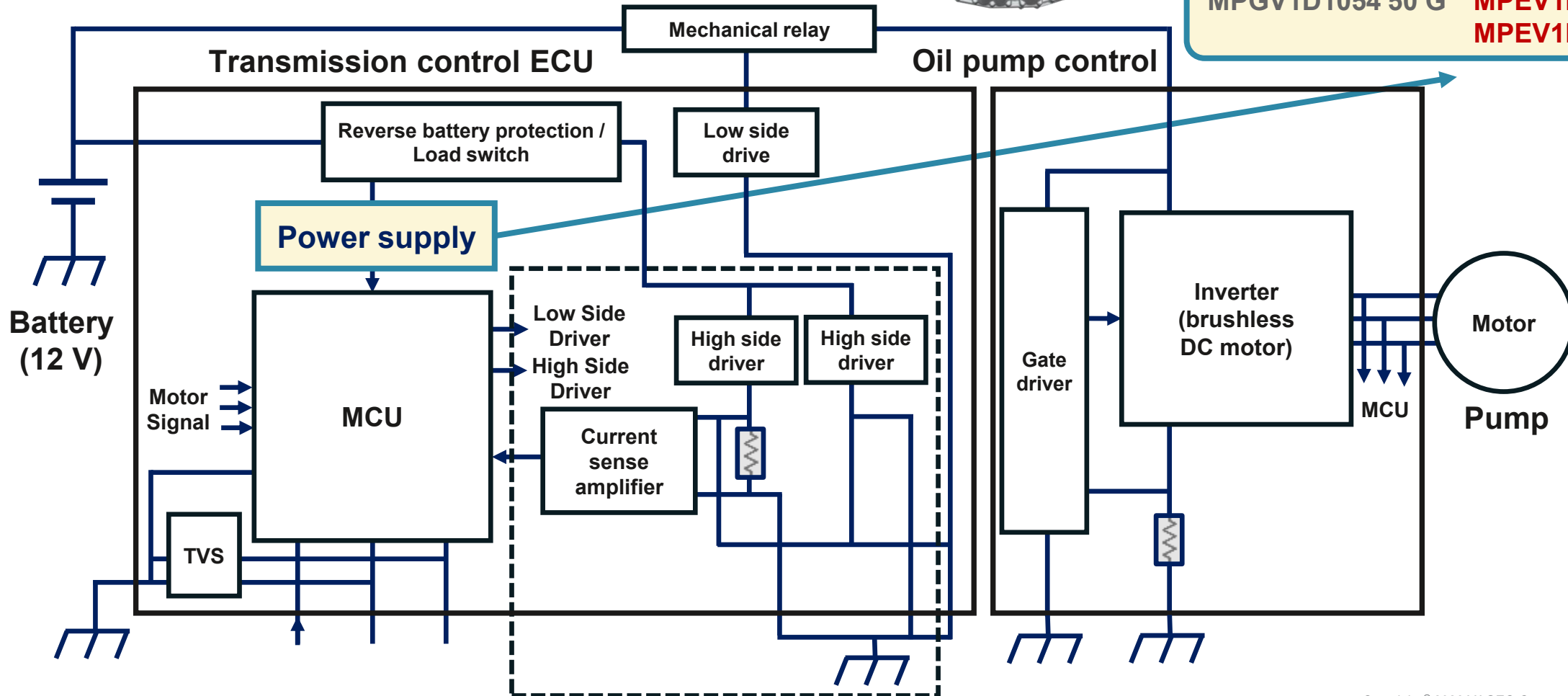


⑭ Transmission Control Unit (TCU)

System image

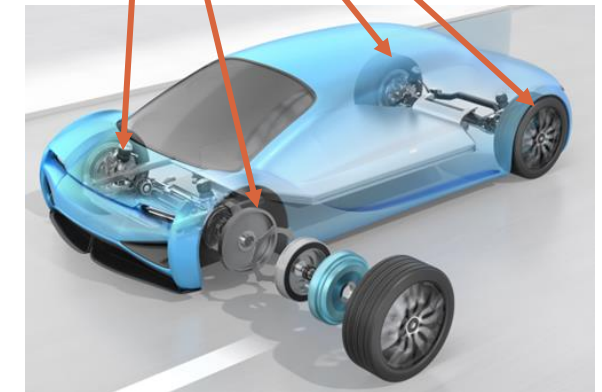
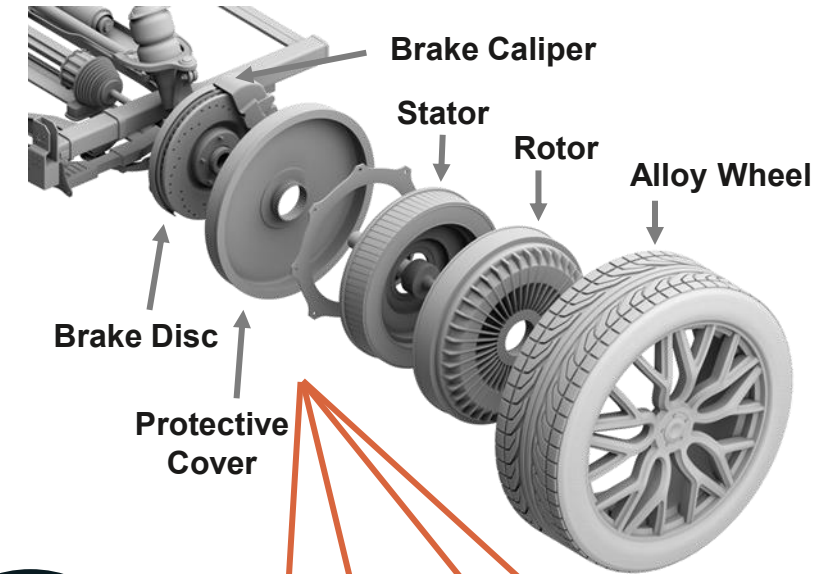
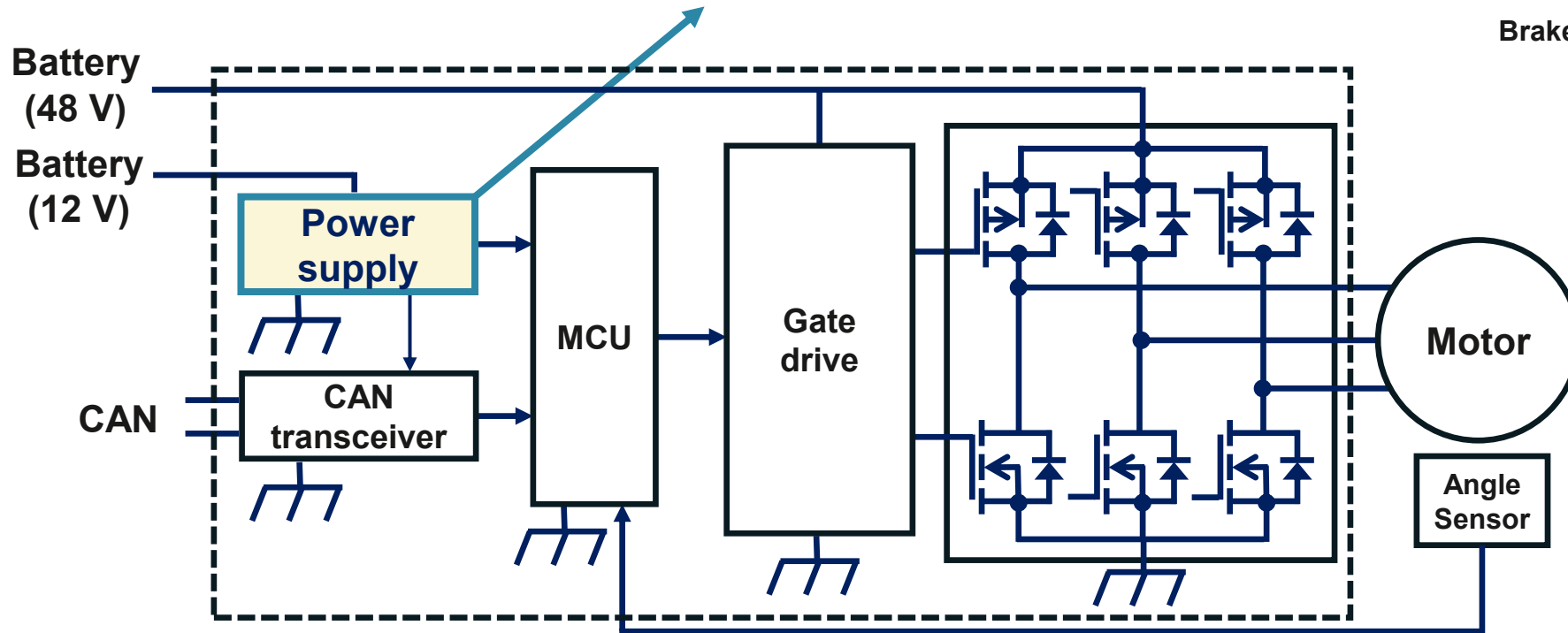


The TCU is installed directly onto the transmission.
As a result, it must withstand high levels of heat and vibration.



⑮ In-Wheel Motor

System image



- Each of the four wheels will need its own motor and inverter.
- Every motor and inverter will include a circuit featuring an inductor.
- This setup demands strong heat and vibration resistance.
- Besides cars, potential applications include forklifts and electric motorcycles.