

Driving automotive forward



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Your partner in systems innovation



Advanced driver assistance system

Advanced-assist and autonomous-driving capabilities for reducing human error

Passive safety systems

Reliable solutions to increase passenger safety



Body electronics and lighting

Innovative analog and embedded processors to optimize comfort and convenience

Infotainment and cluster

Immersive systems that keep drivers more informed and less distracted



Hybrid and electric vehicles

Reducing emissions by electrifying systems from the car to the grid

Start-Stop, most basic level of electrification
Limited recuperation

<5 KW
3%-10% savings

12 V



Downsized internal combustion engine (ICE)
Electric torque assist
Limited electric propulsion

5-12(40) KW
8%-16(30)% savings
48 V (some HV)



Electric-only drive mode
Electric propulsion limited by amount of energy recuperated

20-80 KW
20%-50% savings
(48V) 100 V-400 V



Adds on-board charger (OBC) for recharging and increased electrical mileage

>50 KW
40%-80% savings
(48V) 100 V-800 V



Entirely propelled by electric motor
No ICE on board

>>50 KW
100% savings
(48V) 100 V-800 V



- I INV
- D DC/DC
- B BMS
- O OBC

CO₂ reduction

The roadmap toward zero-emission transportation

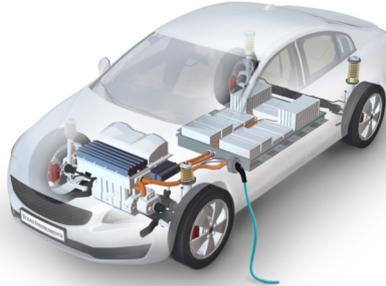
TI Information – Selective Disclosure

Three key powertrain trends



Add power with 48 volt

- Boost efficiency
- Manages power-hungry loads
- Helps transition from lead-acid battery to Lithium based



Evolve battery management systems

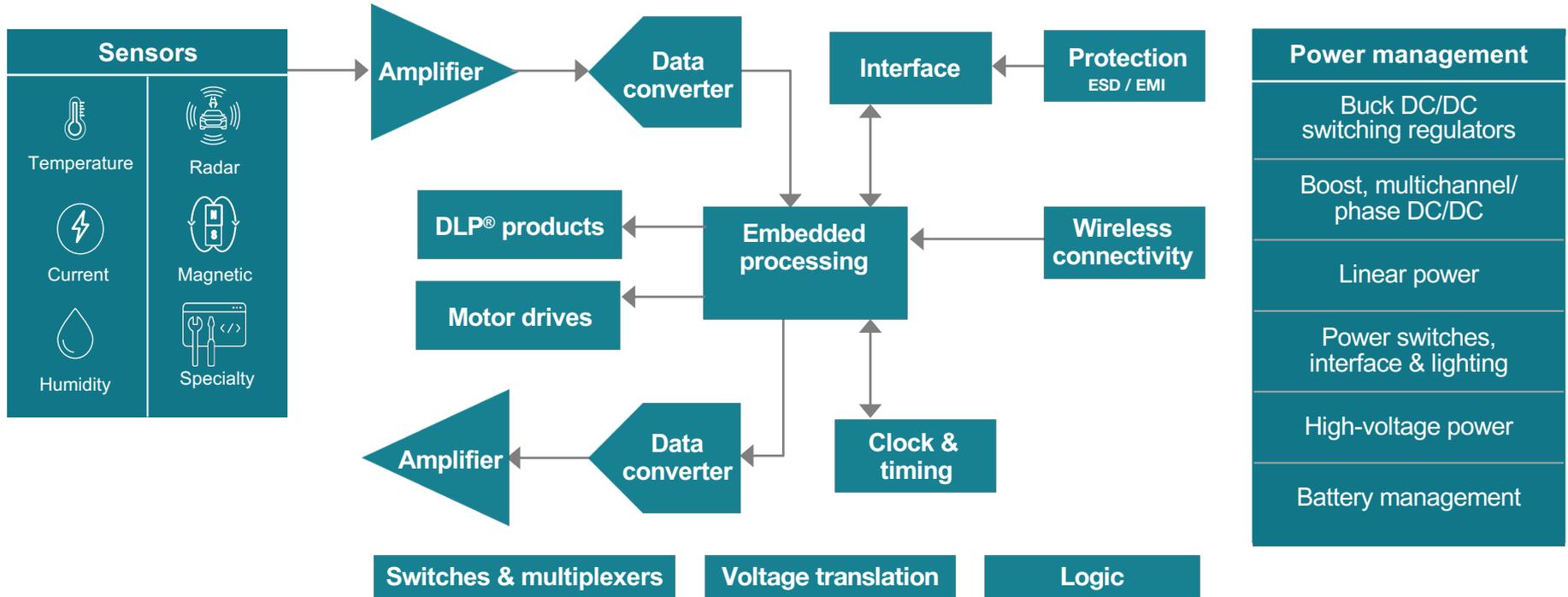
- Wired daisy-chain communication
- Wireless improves reliability, efficiency, and design flexibility and scalability



Integrate powertrain applications

- Reduces weight
- Increase reliability
- Optimize cost

7000+ Analog and embedded products



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