

FEV's ISO15118-20 bidirectional charging functions

FEV SIGNATURE SOLUTIONS

Our solution enables you to quickly develop products for bidirectional charging for all electric vehicles.

FEV offers

- ISO15118-20 compatible software for EV charging
- Emulation of bidirectional EV and charging station
- Interoperability testing of EV and charging station
- Integration with energy management systems
- White box option and customization services for prototypes or series applications



Why FEV

- Proven functions applied to various vehicle applications and continuously updated software library
- Long standing experience in vehicle integration projects for various applications
- Additional services as modification/extension, integration, commissioning and calibration
- Wide range of test facilities available

Reference projects

FEV CHARGING SOLUTIONS

- Vehicle charging functions
- Interoperability testing
- Infrastructure & grid integration

Integration
DC charging function for electric bus

Development
150 kW mobile DC charger with buffer battery

Development
Bidirectional charging prototype with extension of DIN SPEC 70121

Testing
AC & DC charging interoperability in Australia

Simulation
EV fleet for bidirectional charging

Development & testing
DC charging interoperability campaign in India

Development & testing
Bidirectional charging management in simulation and real-world demonstration

Integration
AC & DC charging function for an electric tractor

Integration
Bidirectional charging according to ISO 15118-20 and V2X

FEV's ISO15118-20 bidirectional charging functions

Developed, defined and approved in FEV's software landscape

CHARGING SOFTWARE AS PART OF FEV'S POWERTRAIN CONTROL SOFTWARE – FUNCTIONS OVERVIEW



Energy & charge management

Energy management, power distribution and charging control for the electric vehicle high voltage system.

Smart and bidirectional charging

AC and DC support for Vehicle-to-Grid, Vehicle-to-Home/Building, Vehicle-to-Load, Vehicle-to-Vehicle and more.

Additional features of charging SW

Dynamic mode for enhanced usage of renewable energy resources, optimized energy usage and user managed charging including vehicle conditioning.

Various standards supported

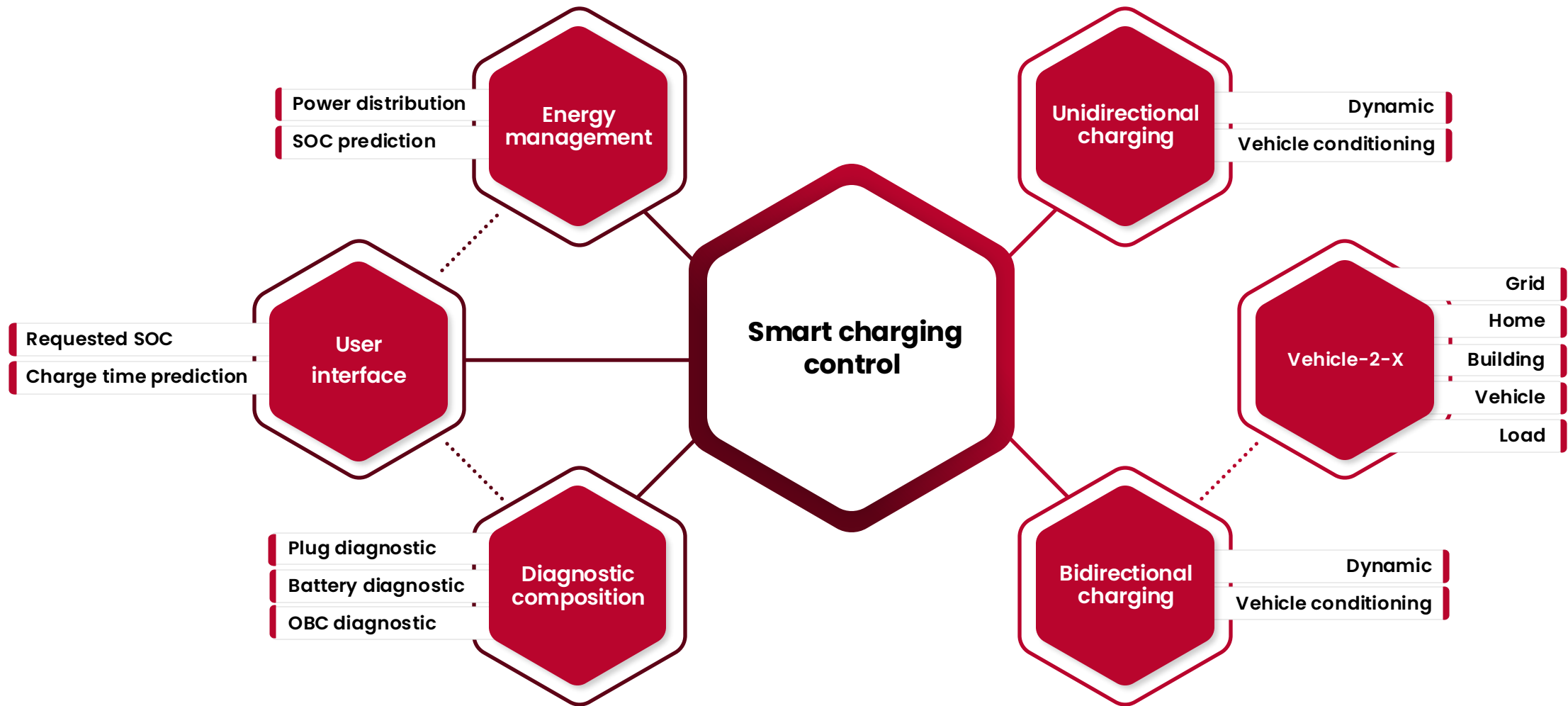
Known standards like NACS, CCS1 and CCS2 are supported. Compliant to ISO15118-20, IEC61581-1 and -23.

Diagnostics

Monitoring of the system state and detection of possible faults. Coordination of the system reaction for maximum system availability.

FEV's smart charging functions

SERIES CHARGING SOFTWARE – FUNCTIONS OVERVIEW



FEV's ISO15118-20 bidirectional charging functions

Developed, defined, approved in FEV's software landscape

Solution scope alternative (if customer is interested in trucks)

CHARGING SOFTWARE AS PART OF FEV'S POWERTRAIN CONTROL SOFTWARE



Energy & charge management

Energy management, power distribution and charging control for the electric vehicle high voltage system.

Smart and bidirectional charging

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Additional features of charging SW

Dynamic mode for enhanced usage of renewable energy resources, optimized energy usage, user managed charging including vehicle conditioning

Various standards supported

Known standards like NACS, CCS1 and CCS2 are supported. Compliant to ISO15118-20, IEC61581-1 and -23.

Diagnostics

Monitoring of the system state and detection of possible faults. Coordination of the system reaction for maximum system availability.